LUFTWAFFE COLOURS

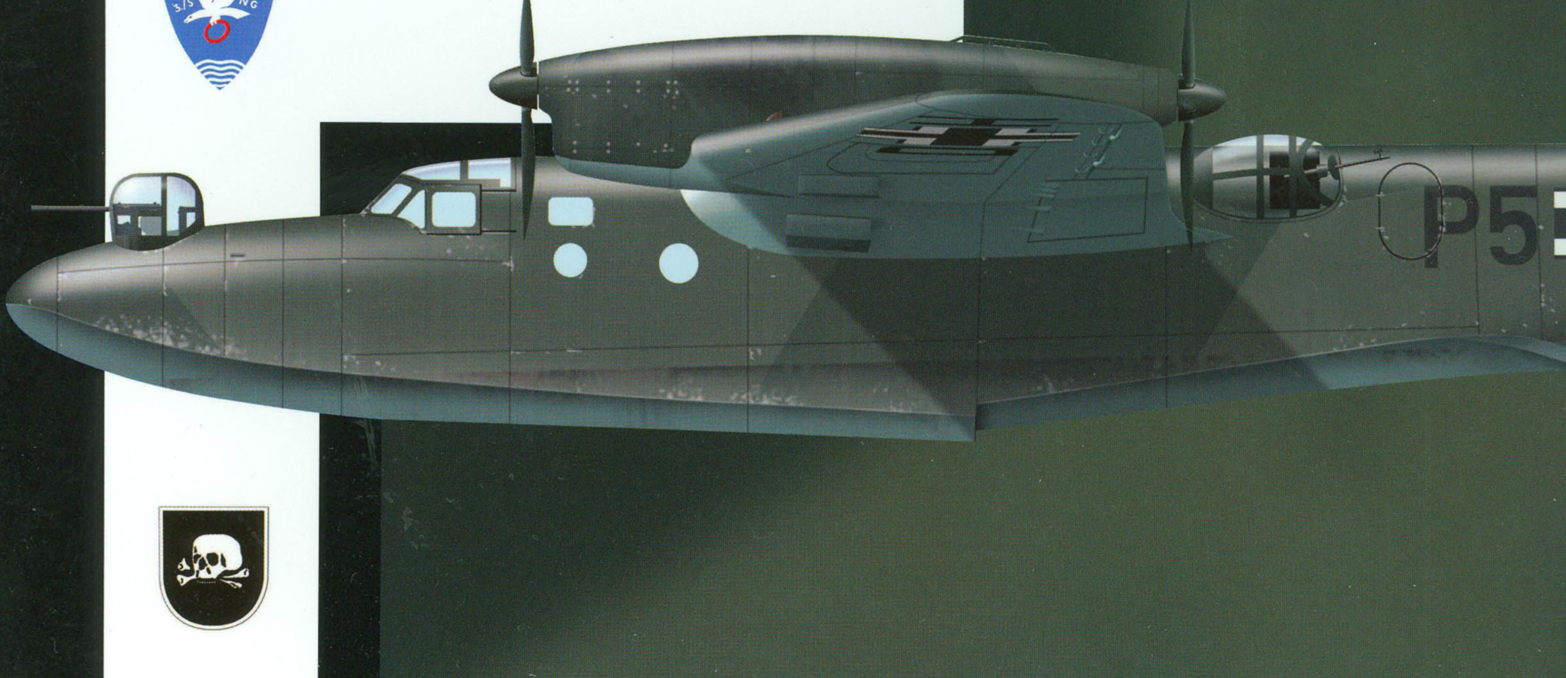
SEEFLIEGER

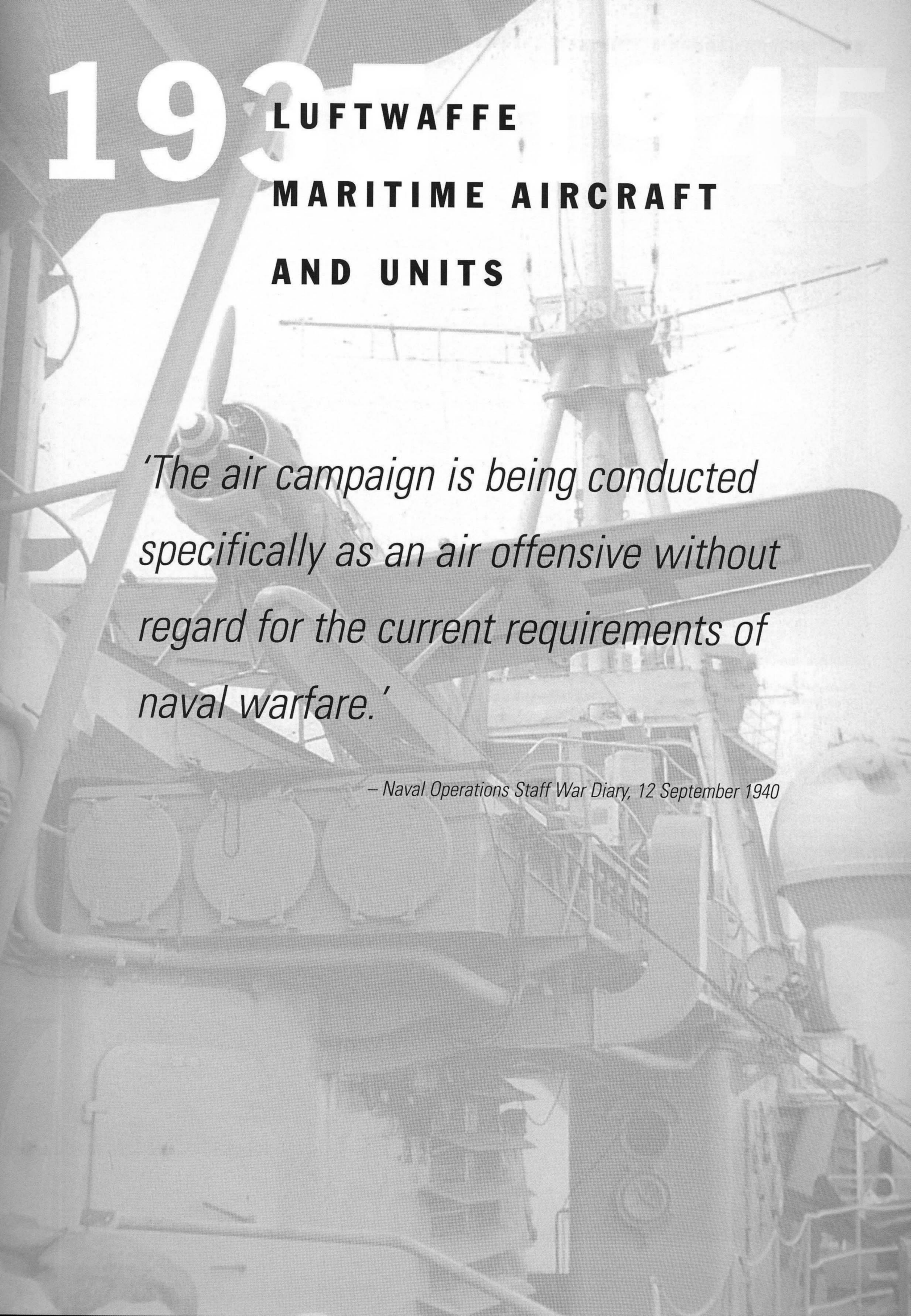
Adam Thompson

with David Wadman

LUFTWAFFE
MARITIME AIRCRAFT
AND UNITS

1935-1945





LUFTWAFFE MARITIME AIRCRAFT AND UNITS

'The air campaign is being conducted specifically as an air offensive without regard for the current requirements of naval warfare.'

– Naval Operations Staff War Diary, 12 September 1940

The Pre-War Era

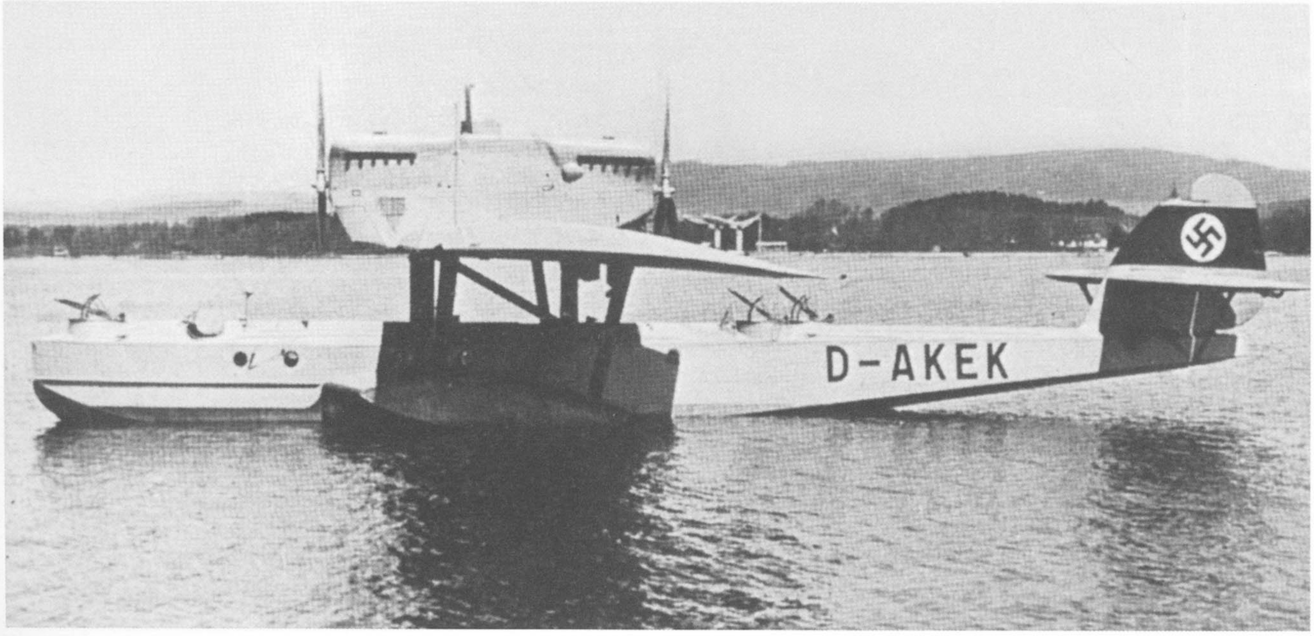
Of all *Luftwaffe* flying units serving during the Second World War, none has been overlooked more than those operating in the maritime role. While historians have generally marginalised their role in the air war, their importance in the context of aerial operations was no less valuable than that of the *Jagd-* and *Kampfstaffeln*[1]. From mine-search operations, to transport, air-sea rescue operations and anti-shipping duties, maritime aviation units played an important role on all fronts during the Second World War.

In 1914, the five-year plan of the *Kaiserliche Marine*[2] had called for an ultimate strength of 36 maritime aircraft. By November 1918, that projection had grown into a force of 864 sea and floatplanes, with many more having served throughout the war. From the cessation of hostilities on 11 November 1918 until the creation of a true German Air Force under the National Socialist Government in 1935, naval aviation in Germany had all but ceased to exist.

In January 1933, the aviation industry was one of the smallest and most insignificant areas of manufacture in post-war Germany. According to the *Reichs Statistisches Amt*[3] for May 1933, it ranked 97th out of 279 industrial branches for which official statistics were kept. Of the 368 aircraft produced during that year, only twelve – three Dornier Do Js, one Heinkel He 59, and eight Heinkel He 60s – were maritime types. By October of that year, the estimated total strength of military aircraft within Germany was given as 100 of all types.

German military planning of the 1920s and early 1930s had assumed that France, Poland, and Czechoslovakia posed the main threat for the near future. Such a threat therefore required little maritime aviation, because the focus of combat operations was expected to be over the European Continent. The publication of General Giulio Douhet's '*Il Dominio Dell Aria*'[4] in 1921, coupled with the successes of the American Billy Mitchell in demonstrating air attacks on shipping (albeit, undefended and stopped dead in the water) made a significant impression on aviation strategists in Germany. So much so that it is not difficult to see why German rearmament and air doctrine during this period focused increasingly on bomber and fighter operations.

Perhaps the most important influence on the development of maritime aviation from 1933 onwards was Hermann Göring, a most determined political adversary for the German Navy. Although a shrewd politician and manipulator, Göring's grasp of the strategic was limited. He understood neither the concept of airpower theory nor that of grand strategy. Furthermore, he was a man afflicted with the most pernicious of all military diseases: inter-service jealousy. Although the Navy never denied the need for an independent air force, it did stipulate that maritime aviation formed an integral part of the fleet in much the same way as S-Boats[5] and submarines. Yet Göring's task of building up a truly



D-AKEK, W.Nr.553, a Do J IId Militär Wal (Military Whale) photographed at an unknown location in the mid-1930s.

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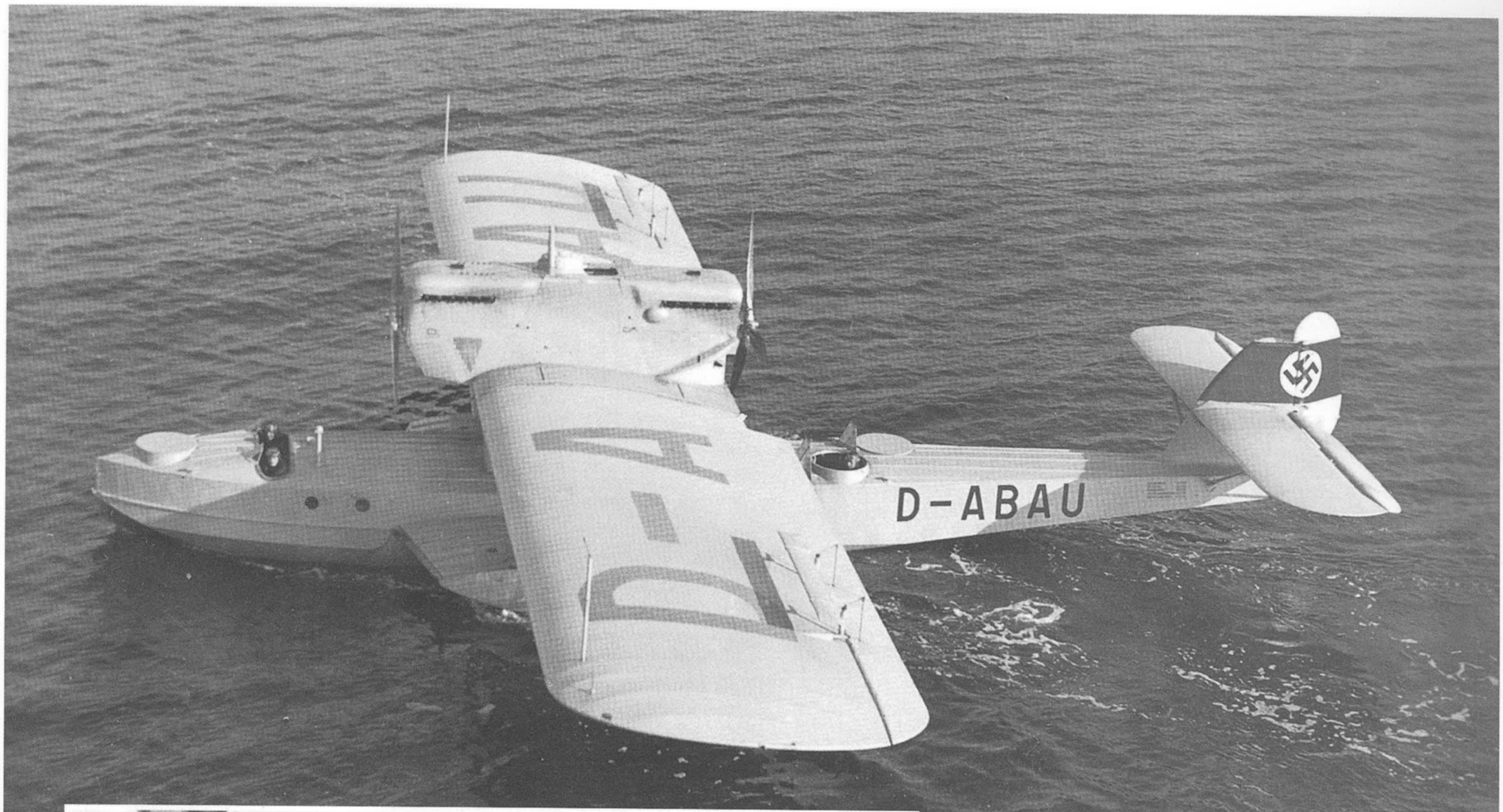
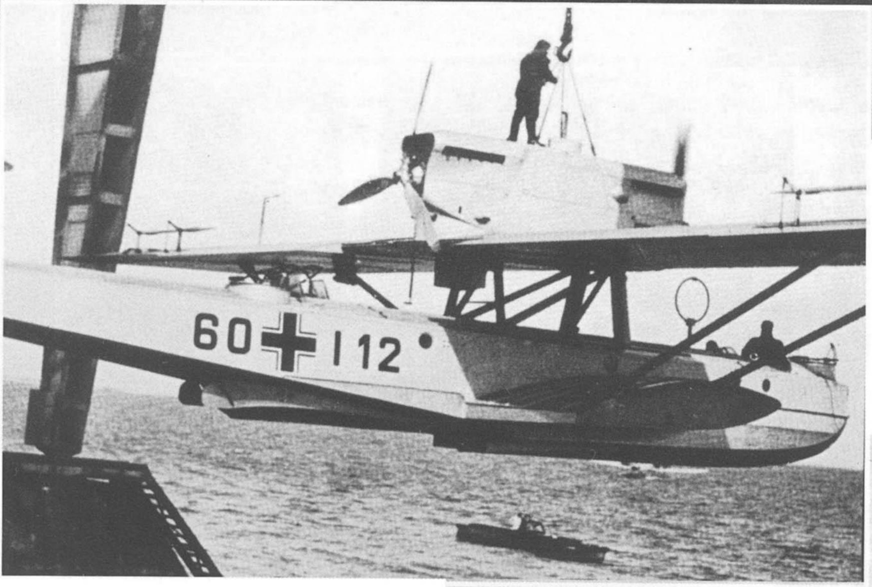
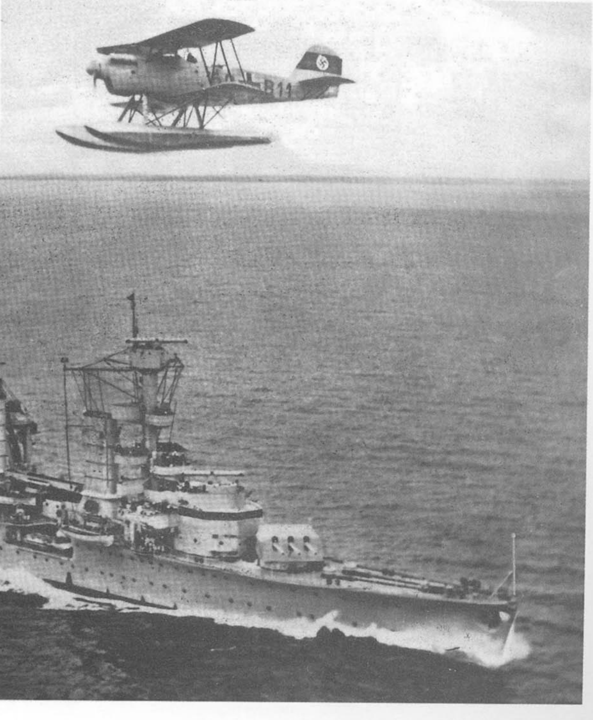
[1] Fighter and Bomber squadrons
[2] Imperial Navy
[3] State Statistical Office
[4] The Command of the Air
[5] *Schnellboot* (Literally: Fast boat), fast, armed coastal motor boats usually equipped with torpedoes.



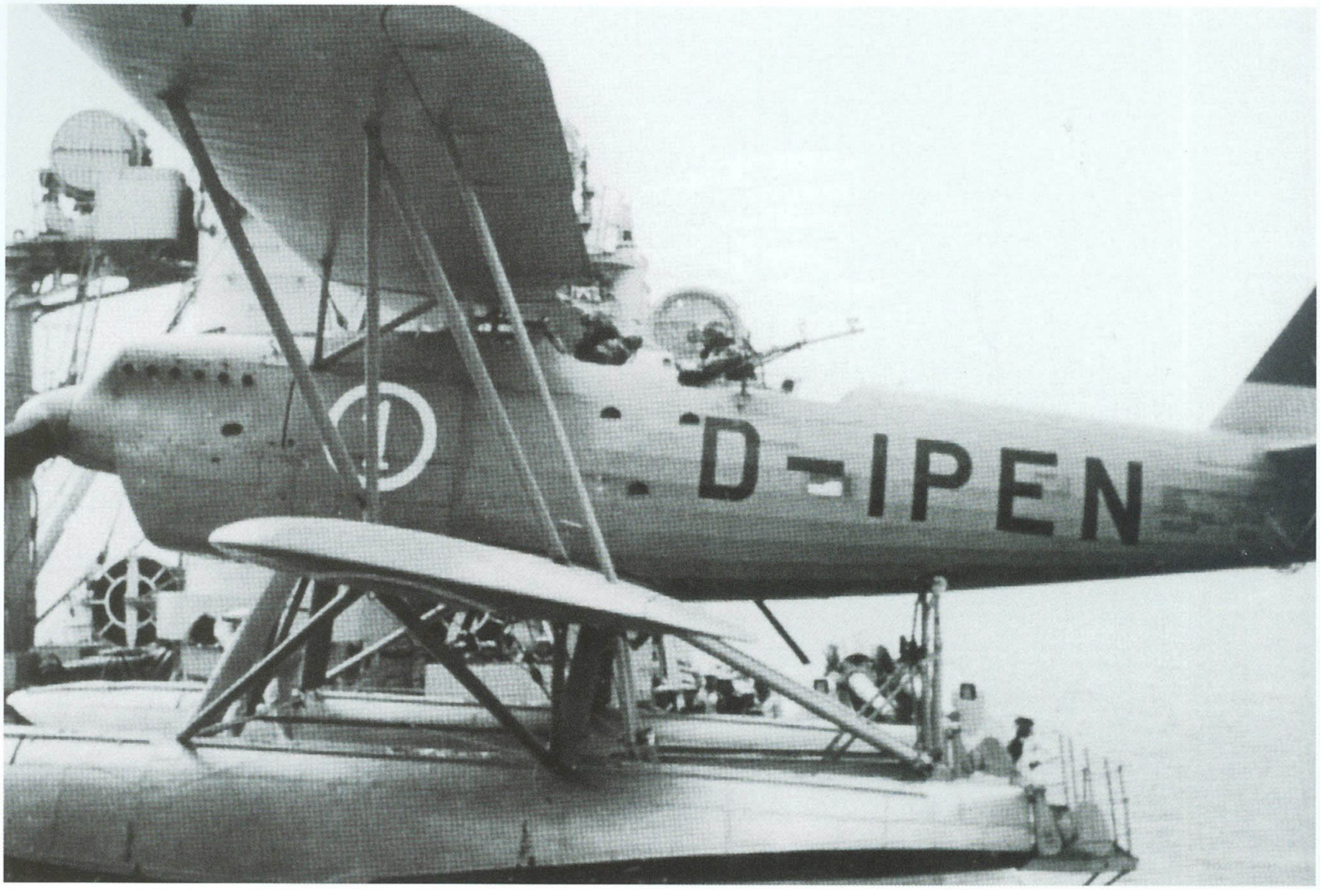


Above: *Do J II d bis 8-ton D-ABAU W.Nr.247. This particular aircraft is believed first to have served with the FFS (See) Warnemünde before going on to the Erprobungsstelle Travemünde and finally, the 2./KFlGr.106.*

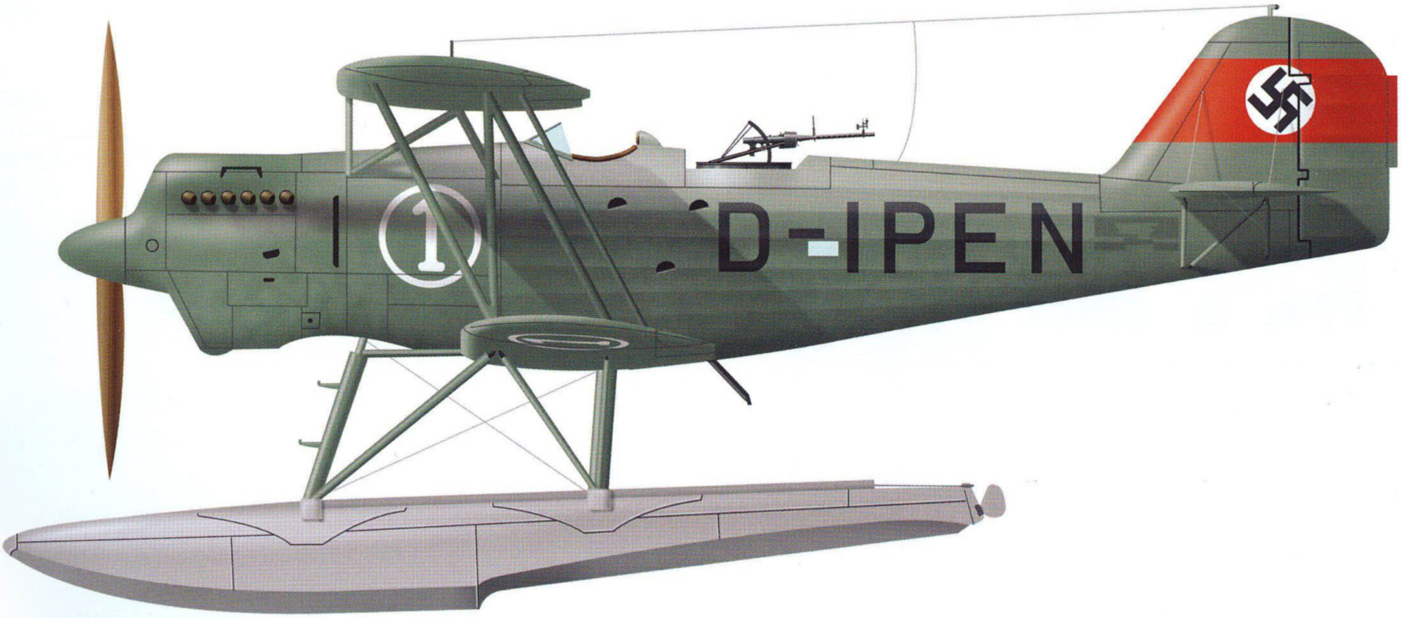
Below: *A pre-war view of Heinkel He 60 C, 60+B11 of the 1./KFlGr.106 flying over the cruiser 'Köln' during pre-war exercises in the Baltic Sea. Clearly visible between the funnels of 'Köln' is the amidships-mounted catapult in the stored position.*



A Dornier Do 15 Militär Wal coded 60+I12 of the 2./KFlGr.106 (formerly the 2./Fliegerstaffel (F) List) is seen here on a hoist prior to being lowered into the water. The five-figure military code and the outer black border to the white outline of the fuselage Balkenkreuz suggests that the photograph was taken circa mid-1936. In common with other military aircraft types of the period, this aircraft wears an overall coat of 02, often referred to as RLM 02 Grüngrau.

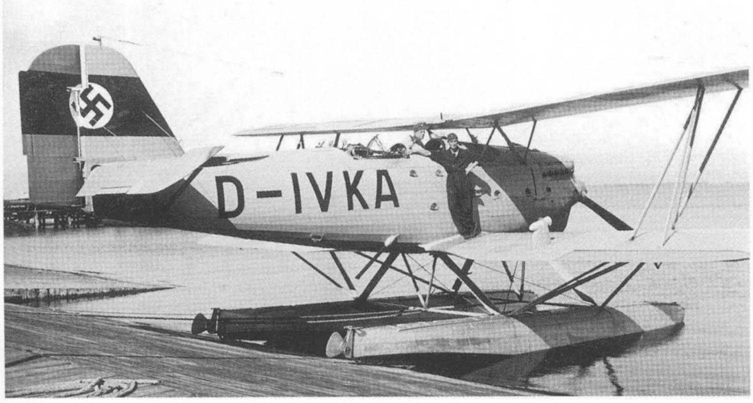


Heinkel He 60, D-IPEN photographed aboard the Kriegsmarine light cruiser Königsberg circa 1935. It was later assigned to the Bordfliegergruppe 196 where it received the code 60+F95.

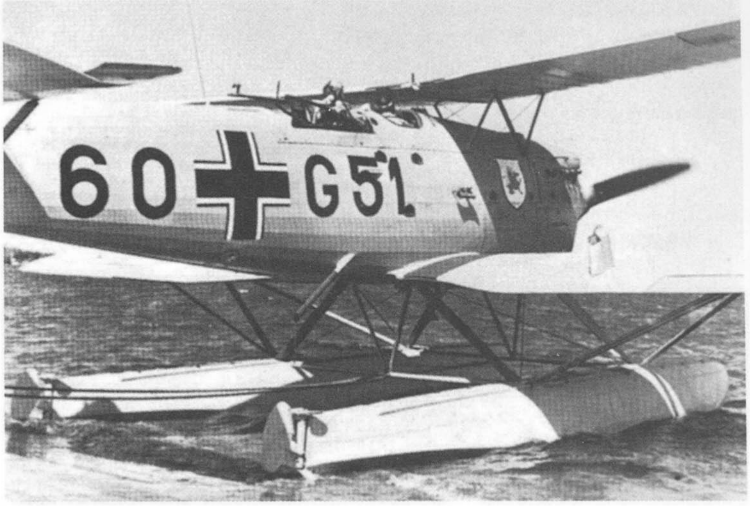


Heinkel He 60, D-IPEN, on board the light cruiser 'Königsberg' circa 1935

When photographed, D-IPEN wore an overall finish of grey 02 or 63 with treated but unpainted floats and carried the standard Reichsflagge across her fin and rudder. Her civil registration was applied in black while the circle and figure '1' carried on both fuselage sides were white and were repeated outboard on the tips of the top wing and again on the lower surfaces of the bottom wing.



Ground crew pose with Heinkel He 60 C, D-IVKA at Berg am Rügen circa 1936. Finished in overall 63 with unpainted but treated floats, its black-painted civil registration and Reichsflagge across the fin and rudder suggests that the aircraft was in use up to the time of the unveiling of the new Luftwaffe.



In this view the pilot of Heinkel He 60 C, 60+G51 of the 1./KFlGr.506 is starting his engine in preparation for moving away from a slipway, probably at its base at Dievenow – note the mooring lines still attached to the central float strut assembly. Visible on the forward fuselage is the Staffel emblem of a brown or red Griffin on a blue-bordered white shield.

independent air force during the 1930s made no allowances for the segmenting of the German air effort. If it flew, then it would fly under Göring's personal control – a focal point that created so much political tension throughout the 1930s that it ultimately weakened the position of maritime aviation.

A factor that made it more difficult for the Navy was that Göring, as head of the Five Year Plan, controlled the allocation of resources and was therefore able to regulate the size of maritime aviation and its further expansion. Furthermore, the *Kriegsmarine*[6] required the air force to supply aircrew to complement its own aviators to furnish maritime air units. This reliance placed on Göring by the *Kriegsmarine* was a critical component in the tactics the former used to first undermine *Großadmiral* Erich Raeder, then his successor, *Großadmiral* Karl Dönitz and their respective staff.

A further impediment to German maritime aviation was the aircraft types with which it was forced to operate. Primarily, the 1936 deployment of the cumbersome twin-engined Heinkel He 59 seaplane

Credited with 20 aerial victories during the First World War, Hermann Göring was the last commander of the famous Jasta 1. After the war, he promoted aviation ventures in Sweden and Germany and became a member and avid supporter of Adolf Hitler's Nazi Party and he became a leading political figure. On 1 March 1935, he was made Commander in Chief of the newly created Luftwaffe. Promoted to Field Marshal in 1938, on 19 July 1940 he became the sole German to hold the rank and position of Reichsmarschall. Known as being both congenial and ruthless he was fond of fine living and increasingly shirked his command responsibilities and eventually fell out of Hitler's favour. Removed from his position in April 1945 he escaped what could have been a worse fate through troops loyal to him. Captured by the Allies in May 1945, he was tried at Nuremberg and sentenced to death but cheated the hangman by taking his own life on 15 October 1946.

Erich Raeder was born on 24 April 1876 at Wansbeck near Hamburg and as chief of staff to Admiral Franz von Hipper during the First World War; he took part in the battles of Dogger Bank (1915) and Jutland (1916). Appointed to overall command of the German navy in 1928 he played an active role in secretly rebuilding the navy in violation of the Treaty of Versailles. He frequently disagreed with Hitler on war strategy and in 1943, following a series of German naval defeats, resigned from his post, and was succeeded by Großadmiral Karl Dönitz. Arrested by the Soviets in 1945, Raeder was sentenced to life imprisonment as a war criminal but was released in 1955.

Karl Dönitz was born in Berlin-Grünau on 16 September 1891 and enlisted in the Imperial Navy as a sea cadet in 1910. Commissioned upon completion of his training, he served as an officer on the cruiser SMS Breslau in the Mediterranean until October 1916 when he began his U-boat career. On 4 October 1918, his boat UB-68 was lost due to stability problems during a dive and the British captured Dönitz and a number of his crew. Returning to Germany after the end of the war he spent the next sixteen years in the Reichsmarine and, following Hitler's rise to power, was given the task of creating a new U-boat fleet. Appointed Führer der Unterseeboote in January 1936, during the early years of World War Two, Dönitz quickly turned the new U-boat arm into a serious threat. In January 1943, he replaced Raeder as Commander in Chief of the navy. On 20 April 1945 and facing the collapse of his Nazi regime, Hitler appointed him northern military and civil commander and later named him as his successor as President of the Reich, Minister of War and Supreme Commander of the Armed Forces. Following Hitler's suicide on 30 April, Dönitz opened negotiations for Germany's surrender to the Allies and in 1946 was sentenced to ten years' imprisonment by the International Military Tribunal at Nuremberg. Released from prison in 1956, he died on 24 December 1980.

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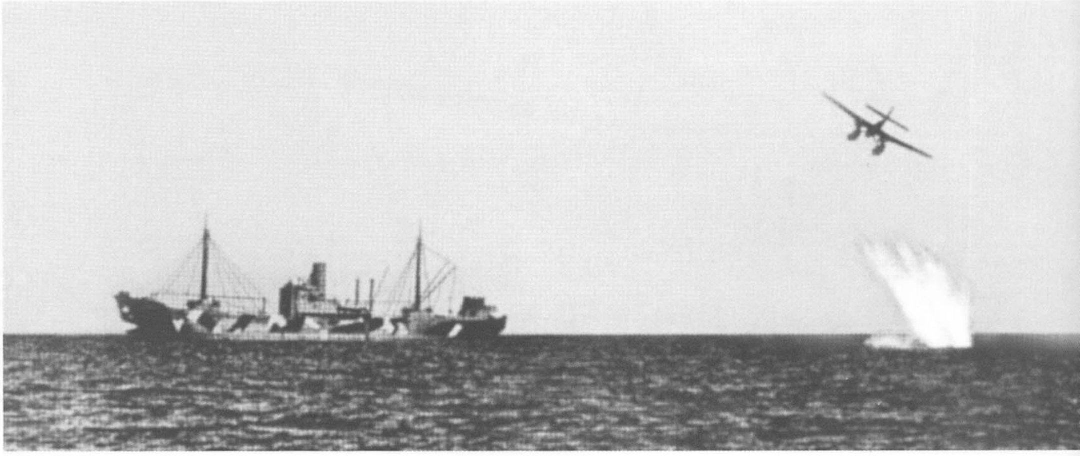
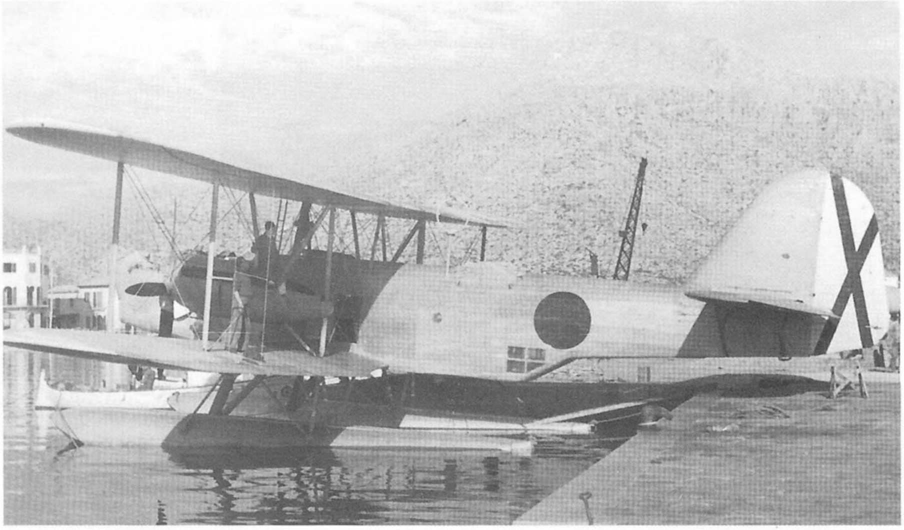
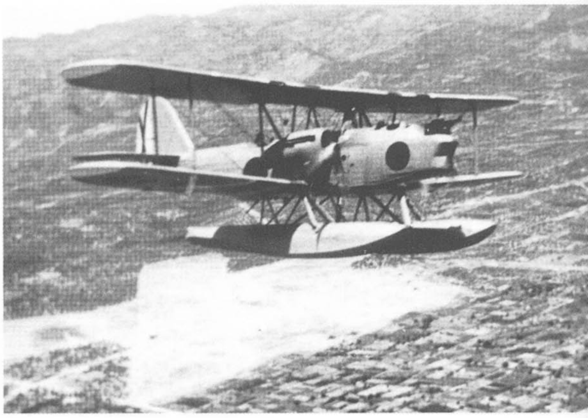
[6] National Socialist title for the Navy which came into effect on 1 June 1935 with the creation of the *Wehrmacht* (Armed Forces).



This Propagandakompanie photograph shows the pilot of an unidentified He 115 banking his aircraft away as he and his crew hone their torpedo-dropping skills against an apparently stationary target training ship.



An unidentified Heinkel He 59 C of the Legion Kondor's AS/88, which operated in support of General Francisco Franco's Nationalist forces during the Spanish Civil War.



A Heinkel He 59 C of the Legion Kondor's AS/88 airborne over the Spanish countryside during the late summer of 1936.

to Spain highlighted the deficiency in German maritime aircraft design. However, it was not just the type of aircraft that German airmen found wanting, but also various weapons. Amongst their other duties, the crews accompanying the He 59s to Spain were under instruction to test all aspects of the Norwegian-designed Horten torpedo under operational air-dropped conditions. However, as many of the crews were later to discover, the weapon was prone to malfunction and by mid-1937 found to be so generally lacking in all aspects of performance, that it was discarded in favour of conventional bombs.

For the duration of the operations in Spain, a *Staffel* of maritime aircraft was created that operated under the overall command of the *Legion Condor*. Known as *Aufklärungsstaffel See* 88[7] it scored its first major success on 30 January 1937, when the crew of a He 60 spotted the 5,100-ton loaded steamer, *Delfina,* sailing between Almeria and Málaga. When word was received at *AS*/88's base in Cadiz, *Oberleutnant zur See* Werner Klümper took off in a He 59 armed with a single torpedo. Although he was unable to score a success, a later sortie with bombs caused considerable damage. As a result, the ship's captain was forced to beach his vessel near Nerja. The following day, Klümper and his crew achieved a more daring success.

On 31 January 1937, the 4,600-ton Republican steamer, the *Nuria*, loaded with Republican troops, was spotted 20 nautical miles off Cartagena. As Klümper later recalled, 'I took up station [in a He 59] near the ship as another He 60 flew low over its foredecks and dropped a pouch containing a message.' Written in Spanish, the message ordered the *Nuria* to 'Halt immediately – no radio communications or you will be torpedoed. Further orders will follow.' To emphasise the point, the pilot of the He 60 dropped impact-fused bombs in the water just off the bow of the ship. Immediately it stopped.

In order to capture the ship from the air, Klümper had devised a cunning ploy. As the ship stopped dead, a further message was dropped which ordered the *Nuria*'s captain to alter course south and proceed at maximum speed. At the bottom of the second message was scrawled the warning: 'If you deviate from this order you will be torpedoed at once.' With a torpedo clearly visible slung beneath Klümper's He 59, the *Nuria* did as instructed.

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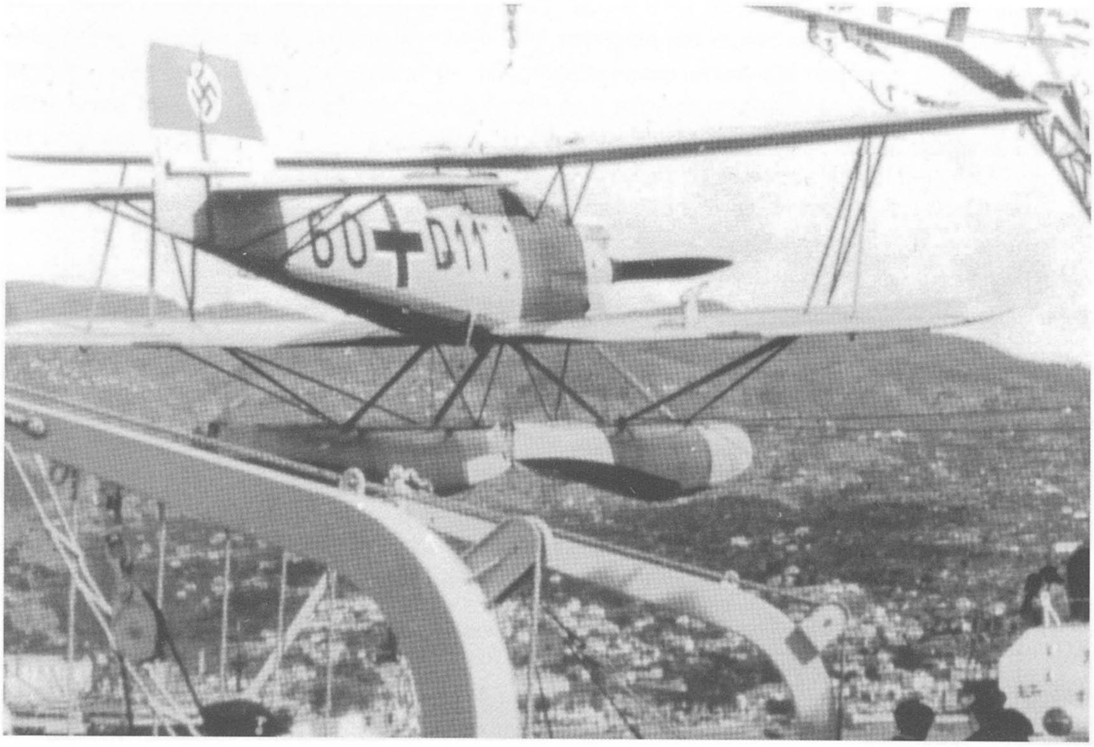
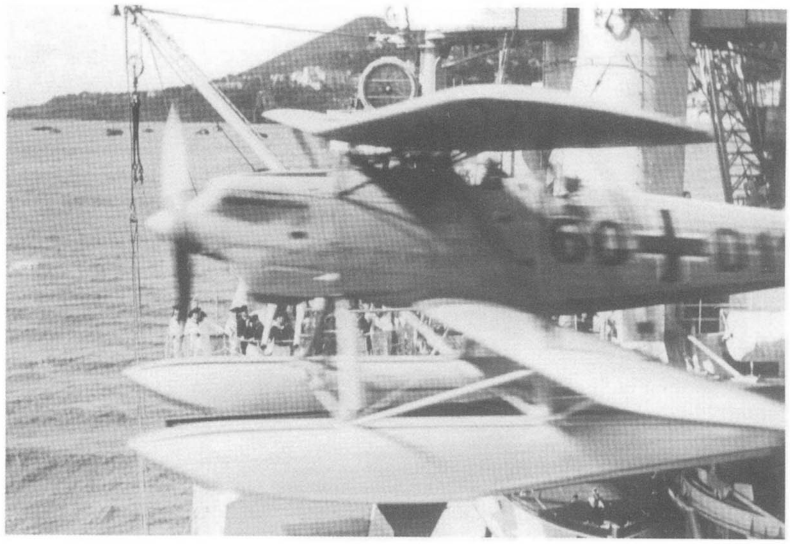
[7] Reconnaissance Squadron Sea 88. Abbreviated as *AS*/88.



Photographed off the coast of Spain during the Spanish Civil War, Heinkel He 60, 60+D11 of the 1./KFlGr.106 is hoisted aboard the battle cruiser 'Deutschland'. Finished in overall grey 63, the floats are in unpainted but treated bare metal with anti-fouling paint applied to the float hulls. Wearing the late 1935 style of Balkenkreuz, read in reverse order, its black-painted codes identify it as aircraft 'D' of the 1./KFlGr.106.



Heinkel He 60, 60+D11 of the 1./KFlGr.506 photographed at the moment of launch from the amidships catapult of the battle cruiser 'Deutschland' during the Spanish Civil War.

With the approach of evening and the He 60 having since returned to Cadiz low on fuel, Klümper instructed the *Nuria* not to transmit under any circumstances. To emphasise the gravity of the situation, Klümper's Spanish-speaking assistant radio operator struck up a bogus conversation with a German submarine supposedly shadowing the *Nuria*. Klümper believed the threat of being torpedoed would be sufficient to bag his prize.

At dawn the following day, Klümper was out again searching for the *Nuria*. Obediently holding course, she was spotted, despite having been moved slightly off course by a storm during the night. During that afternoon, the *Nuria* sailed into Melilla where her capture was completed without bloodshed and, as Klümper rightly claimed, 'It was a fine success!'[8]

Although only two He 59s were originally deployed to Spain, by July 1937 the *Staffel* had seven of these aircraft on strength. In conjunction with the shorter ranging He 60s, they remained the workhorses of *AS*/88, with a further 17 He 59 Bs and eight He 60 Es joining the unit at various stages throughout its time in Spain. Additionally, a small number of Arado Ar 95 A floatplanes were taken on strength to supplement these types during 1938, and towards the end of hostilities were joined by two Heinkel He 115 A floatplanes, coded D-AOHS and D-ANPT, which had been flown to Spain. However, these new aircraft saw no known active service and appear to have been generally employed in evaluation flights.

Despite being a maritime air unit, during 1938 *AS*/88 received orders to support bomber operations over land. As a result, from then until the end of the conflict the *Staffel* played an increasingly important role in these operations, notably supporting the capture of Málaga by bombing and strafing Loyalist positions around the town. Because both the He 59 and He 60 seaplanes were slow and vulnerable to attack, their operations were usually confined to night raids for which the crews developed their own set of tactics. During such operations, the aircraft would effectively glide into the target area with their engines idling, thereby producing as little noise as possible. Over the target, with the bomb load released, the engines were brought back to full power and the crews would hasten their egress from the target area before the defenders had the chance to mount any form of reasonable defence. For the most part the *Staffel* confined its operations to targets on the coast, delivering night attacks against other Mediterranean ports and rail junctions, which generally helped sever links between Barcelona and Valencia. In March 1938 alone, the unit reportedly destroyed or damaged 50 trains, including a number of valuable locomotives. As the campaign in Spain progressed, the *Staffel* also took part in the Battle for Ebro and in the December 1938 offensive in Catalonia. It also figured prominently in the conquest of Menorca.

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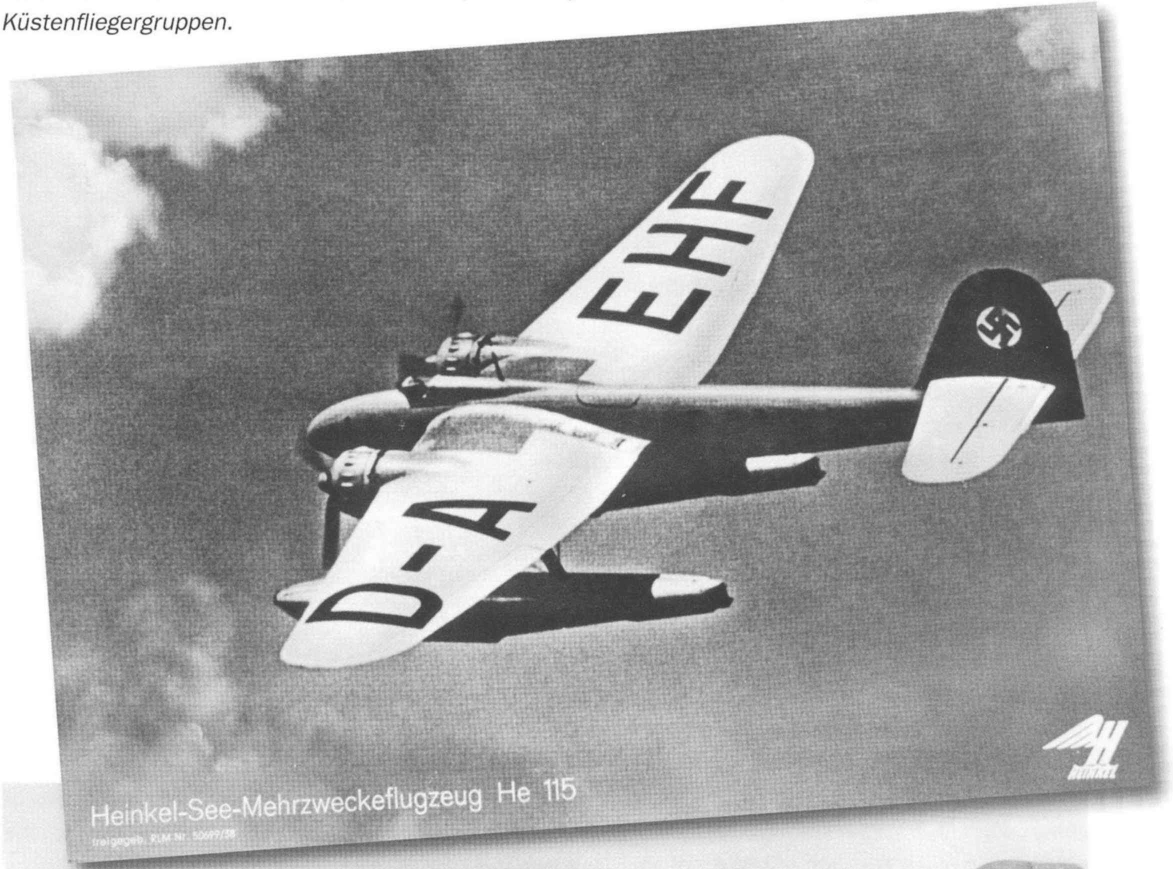
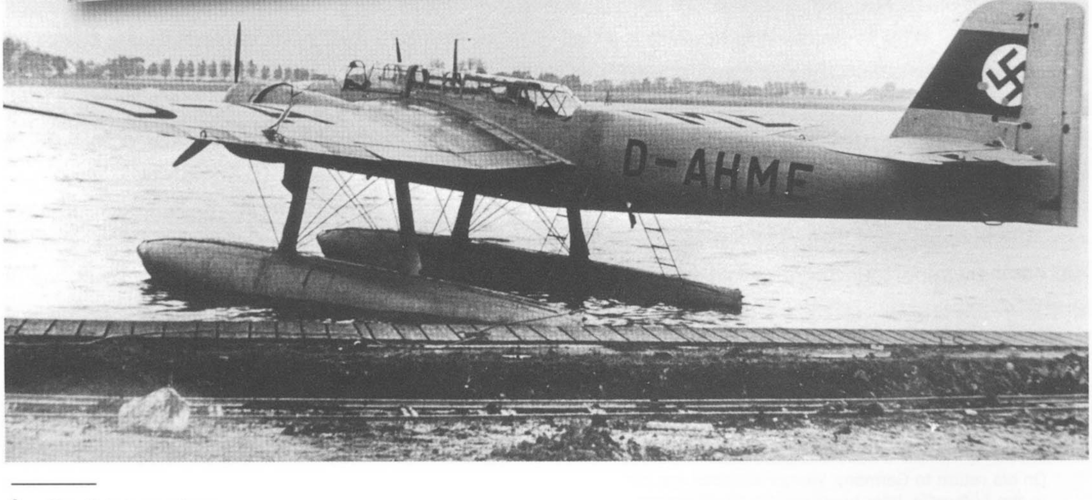
[8] On his return to Germany, Werner Klümper was promoted to Hauptmann and transferred back to the *Luftwaffe*, later becoming the *Staffelkapitän* of the 3./*KFlGr*.906.

When the *Staffel* was recalled to Germany in mid 1939 and the *Legion Condor* disbanded, *AS*/88 had distinguished itself in operations over both land and sea. However, as had been the case with the maritime air units of the First World War, the lessons learned in Spain were completely overlooked by both the leaders of the *Luftwaffe* and *Kriegsmarine* and their respective commands. Upon their return to Germany, the surviving personnel of *AS*/88 were dispersed amongst the various *Seefliegerstaffeln*[9].

The inter-service rivalries, political intrigues, and misapplication of resources meant that by the outbreak of war in September 1939, of the some 4,200 aircraft on strength with the *Luftwaffe*, a mere 240 were either seaplanes or flying boats. As this figure included outdated and training aircraft, the true German front line maritime air strength on 1 September 1939 was just 177 aircraft, of which just 166 were serviceable. For the most part, they were distributed amongst the *Küstenfliegergruppen*.


D-A
EHF
Heinkel-See-Mehrzweckeflugzeug He 115
freigegeb. RLM Nr. 50699/38

A Heinkel company photograph of the He 115 V1, D-AEHF, W.Nr.1553 which was modified by the Erprobungsstelle at Rechlin in early 1938 for record-breaking purposes.



The Heinkel He 115 V4 W.Nr.1977 photographed near the E-Stelle at Travemünde. Allocated the Stammkennzeichen of TI + HC, it is seen here wearing the civilian registration D-AHME.

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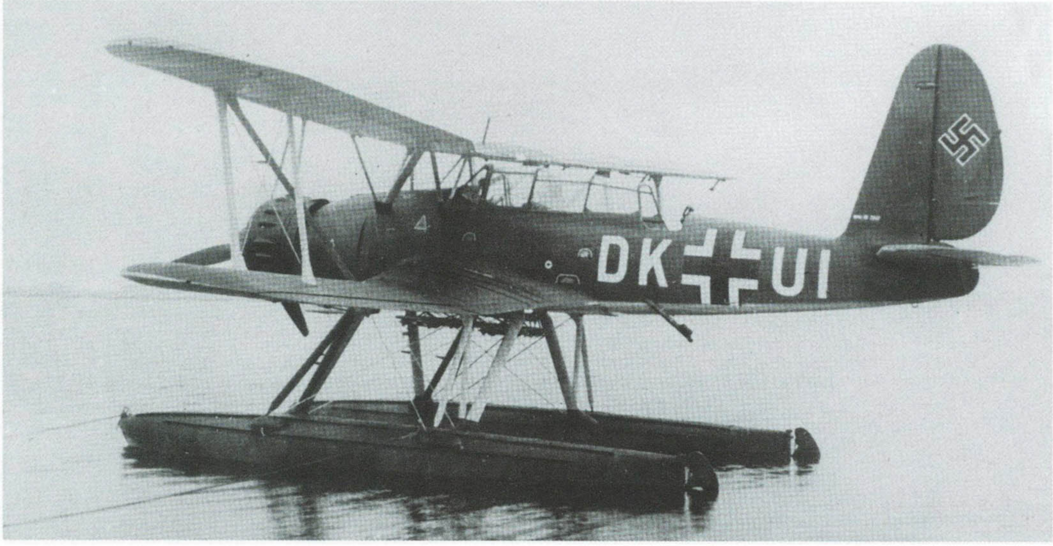
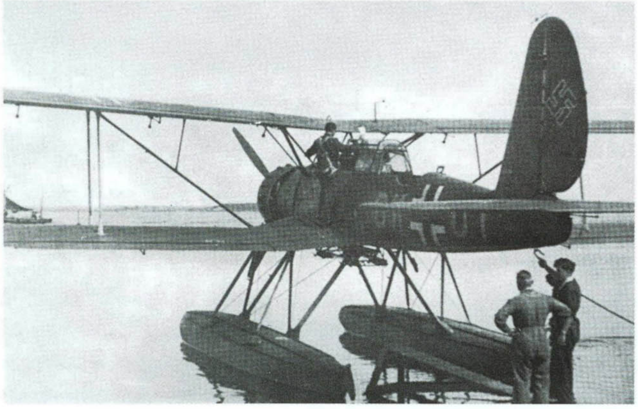
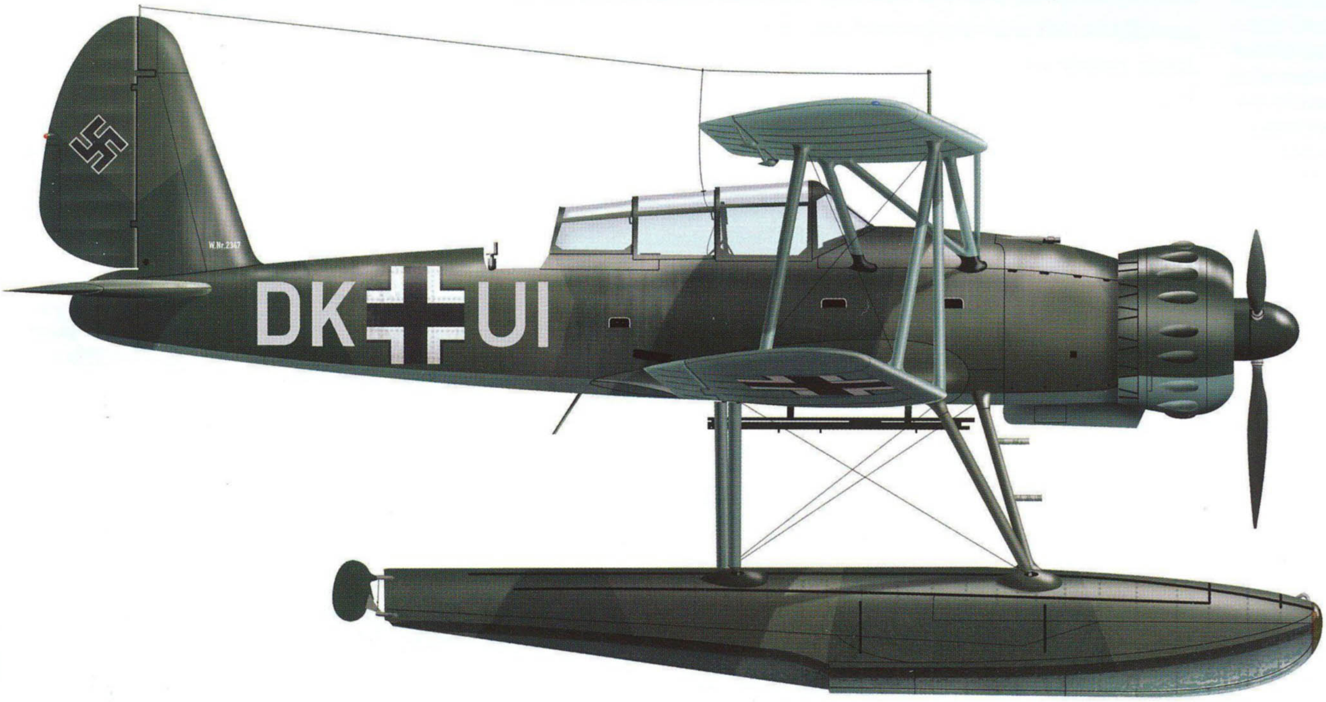
[9] Sea flying squadrons.





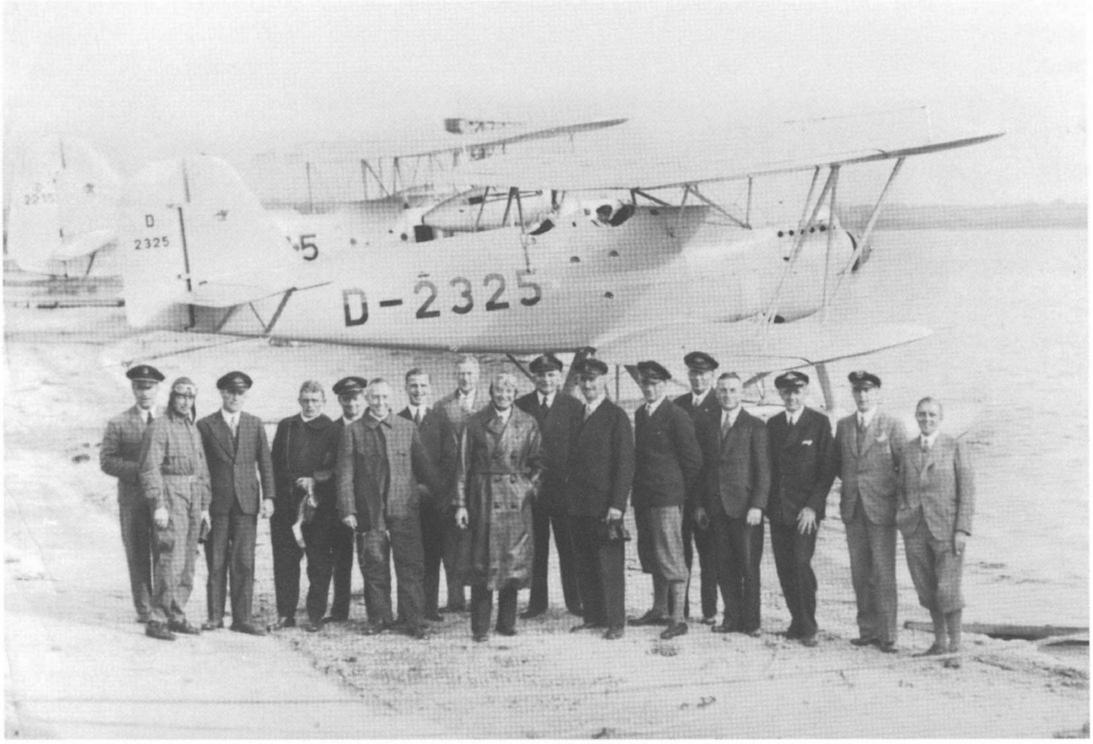
Two undated views of Arado Ar 95 A-1, DK+UI, W.Nr.2347, which, given the civilian appearance of the personnel in the photograph (left), was most likely taken at the Warnemünde-based Arado factory. A small number of this type was sent to supplement the aircraft strength of AS/88 during the closing stages of the Spanish Civil War.



Arado Ar 95 A-1, W.Nr.2347, DK+UI

Finished in a 72/73 upper splinter scheme with 65 blue under surfaces, DK+UI carries the national Balkenkreuz marking in the standard six positions, while the swastika has been applied on the rudder in accordance with early war marking practices. The Stammkennzeichen is applied to each side of the fuselage in white and the aircraft W.Nr. of 2347 has been applied to each lower forward side of the fin.

Personnel of the E-Stelle Travemünde pose for a group photograph in front of Heinkel He 60 prototype, D-2325 and an unidentified Heinkel He 59 circa 1933. Finished overall in what was to become known as 02, the He 60 has its floats left in treated but unpainted metal and carries its black-painted numerical registration in six positions: each fuselage side, both sides of the rudder and top and bottom surfaces of the main wings.

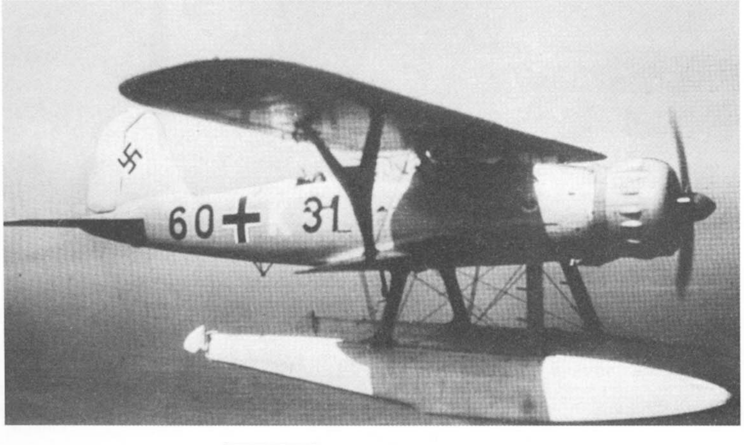


Küsten – and *Bordfliegergruppen*

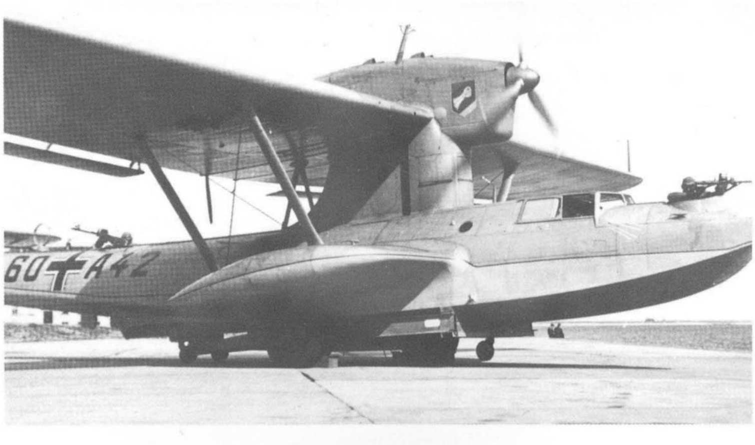
During the early years of the war, the primary maritime air formation of the *Wehrmacht* was the *Küstenfliegergruppe*[1]. Formed along similar lines to the earlier *Seefliegerstaffeln*, which had been in existence since before the Nazi rise to power in 1933, the first *Küstenfliegergruppen* were a composite of three operational *Staffeln*, these being a *Küstennahaufklärungsstaffel*[2], a *Küstenfernaufklärungsstaffel*[3] and a *Küstenmehrzweckestaffel*[4]. Each *Staffel* was assigned to a specific operational requirement and was equipped with aircraft types best suited to that role. Short-range reconnaissance *Staffeln* were usually dependent upon the Heinkel He 60 or He 114, while the much longer-ranging Dornier Do 18 flying boat equipped the *Küstenfernaufklärungsstaffel.* In order to support multi-purpose operations, such aircraft were impractical and so the 3.*Staffel* was equipped with the Heinkel He 59. In this way, a single *Küstenfliegergruppe* would be able to service a variety of operational needs without requiring additional help or support from other *Gruppen.*

The 1.*Staffel,* or short-range squadron, was responsible for conducting shipping and coastal reconnaissance in such areas as the Baltic, Skagerrak, and Kattegat, while the 2. or long-range *Staffel* was responsible for similar operations, but on a larger scale – more typically over the North Sea and upper reaches of the English Channel. The 3. *Staffel* was designed to serve a variety of operational

An overall grey 63 Heinkel He 114 A of the 1./KFlGr.306 airborne from its base on the Baltic island of Rügen during the immediate pre-war period. Originally formed at Norderney on 1 July 1936 from elements of the 1.(M)/Fliegergruppe (See) 106, exactly one year later the Staffel was redesignated as the 1./KFlGr.506 but was re-formed at Dievenow on the same date and remained as such until 22 October 1939 when it became the 3./KFlGr.806.



A Dornier Do 18, coded 60+A42, of the 2./KFlGr.406 sits on its beaching trolley during an engine run-up on the slipway at its base at List on the North Frisian Island of Sylt. Clearly visible on the forward engine cowling is the Staffel emblem of a steel gauntlet superimposed on a blue, red and yellow diagonal background contained within a shield.



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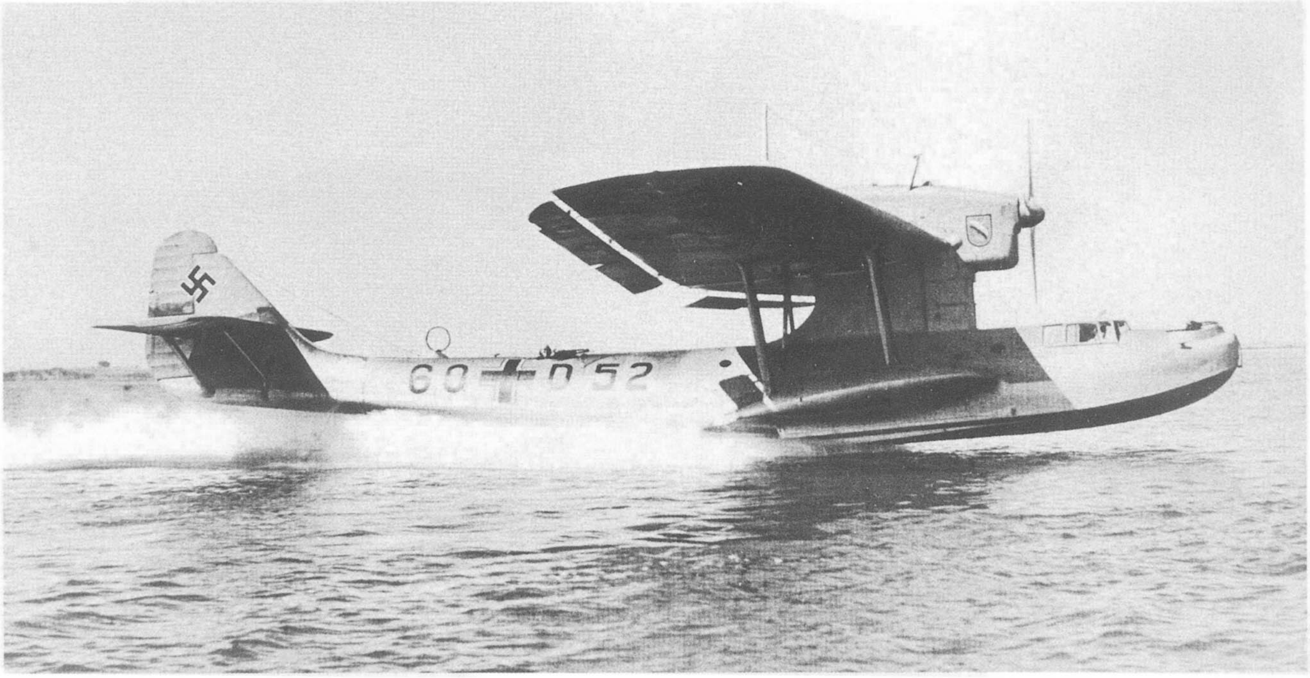
[1] Coastal flying group.

[2] Short-range coastal reconnaissance squadron.

[3] Long-range coastal reconnaissance squadron.

[4] Multi-purpose coastal squadron.

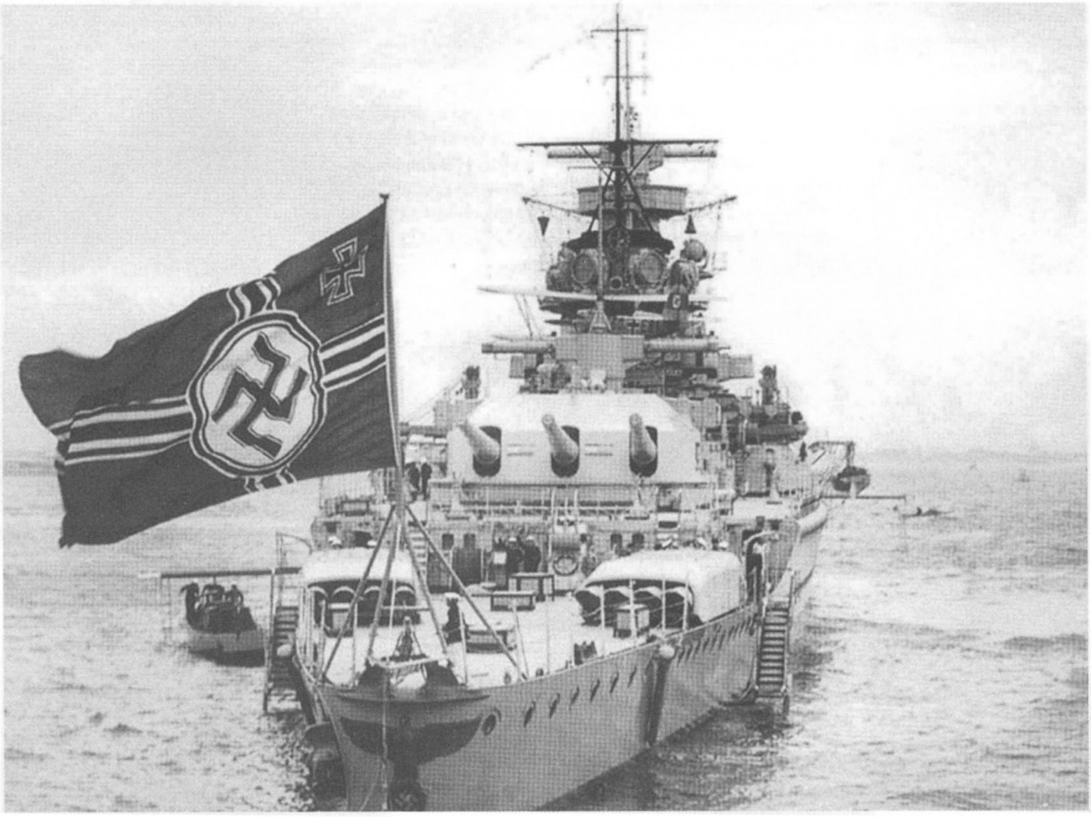


Dornier Do 18 60+D52 of the 2./KFlGr.506 about to become airborne from the waters of the Stettiner Haff (Stettin Lagoon), close to its base at Kamp in north-eastern Germany. Finished in overall 63, it carries the emblem of a swan and its shadow superimposed on a map of the Stettiner Haff. Formed at Kamp in December 1937, on 22 October 1939 the Staffel became the 1./KFlGr.406 but was itself re-formed at List on the same date and remained in service until early October 1941, when it was redesignated as the 2./KFlGr.906.

duties such as aerial mining, torpedo operations or the search and inspection of merchant shipping as required. At any stage, any of these *Staffeln* could be used as air-sea rescue services, although this form of operation was limited.

The first complete *Küstenfliegergruppe* was formed in July 1936 and by the outbreak of war, there were five such *Gruppen*, comprising 14 *Staffeln* and five *Stabsstaffeln*. Operations ranged over the Danzig Bight to the East, and over the North Sea and English Channel to the West. Operating in conjunction with the *Bordfliegergruppe* 196[5] the various short-range coastal squadrons kept close watch over the waters of the Kattegat and Skagerrak, which were frequented by British submarines hunting German shipping or sowing mines.

The successor to the earlier *Seefliegerstaffel M1*, *BFlGr.*196 operated in much the same way as the short-range squadrons except that the 5. *Staffel* supplied aircraft, servicing personnel and aircrew



Stern view of the battle cruiser, 'Admiral Graf Spee' at the Spithead review in May 1937 as the German naval representative for the coronation of His Majesty King George VI. Clearly visible mounted on the catapult abaft the funnel is one of the two embarked Heinkel He 60D aircraft which were replaced by a pair of Arado Ar 196 floatplanes shortly before the cruiser left Germany for the South Atlantic in August 1939. Interestingly, as 'Graf Spee' was at sea at the outbreak of war, the 400 kg (880 lb) large bronze eagle motif on the stern was not removed from the ship and was recovered from the wreck during February 2006 and placed on display in a Montevideo hotel.

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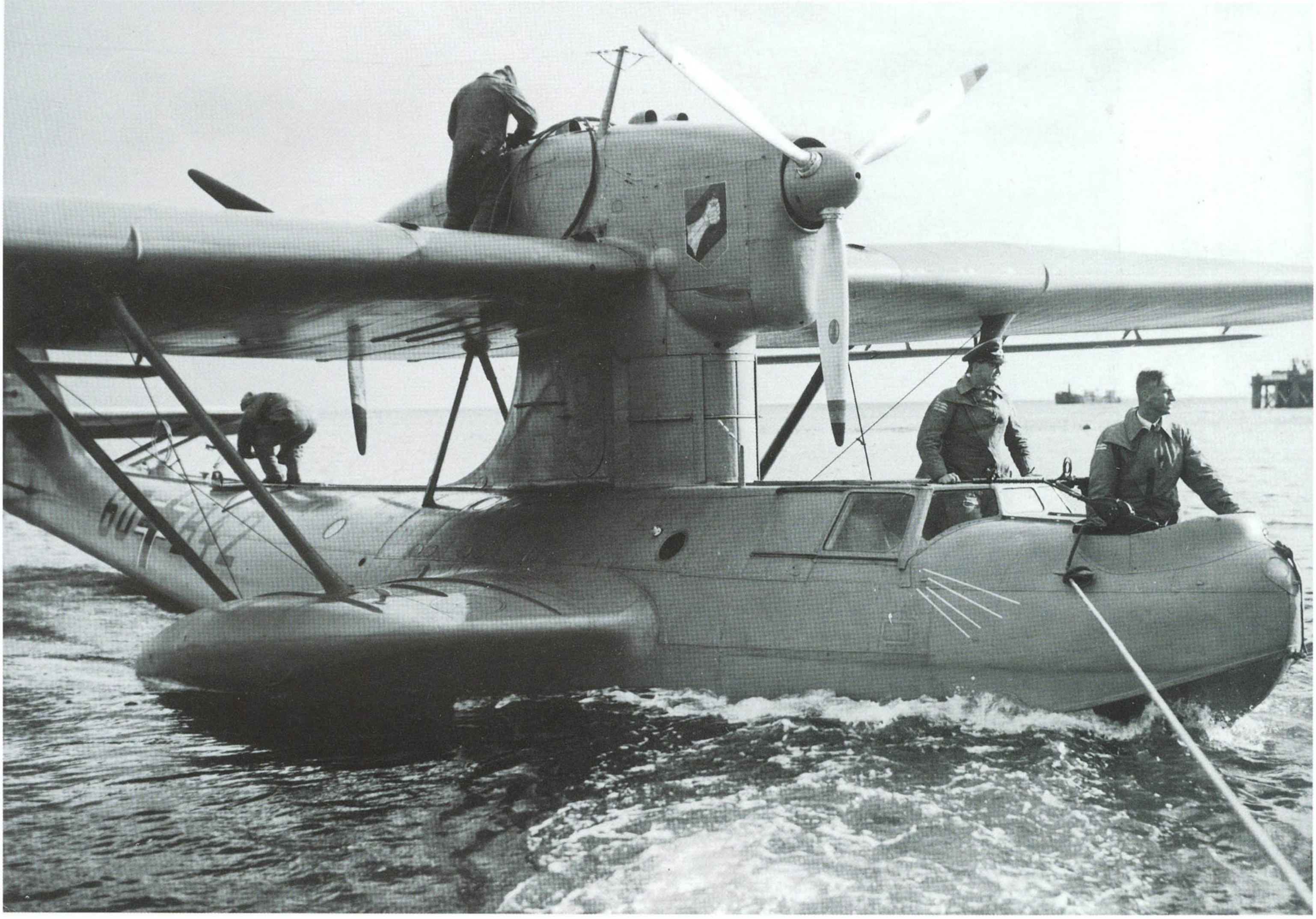
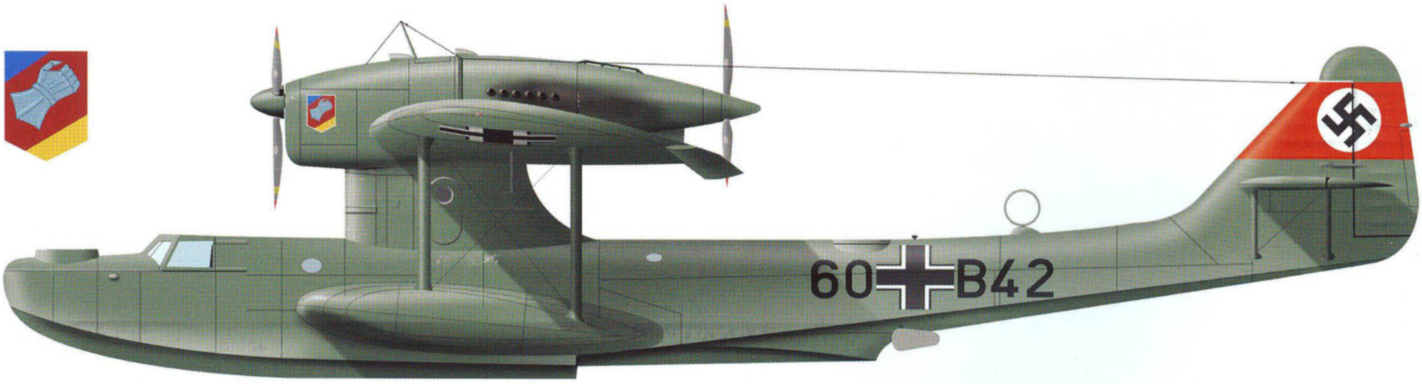
[5] Shipboard (or embarked) flying group 196. Abbr: *BFlGr.*

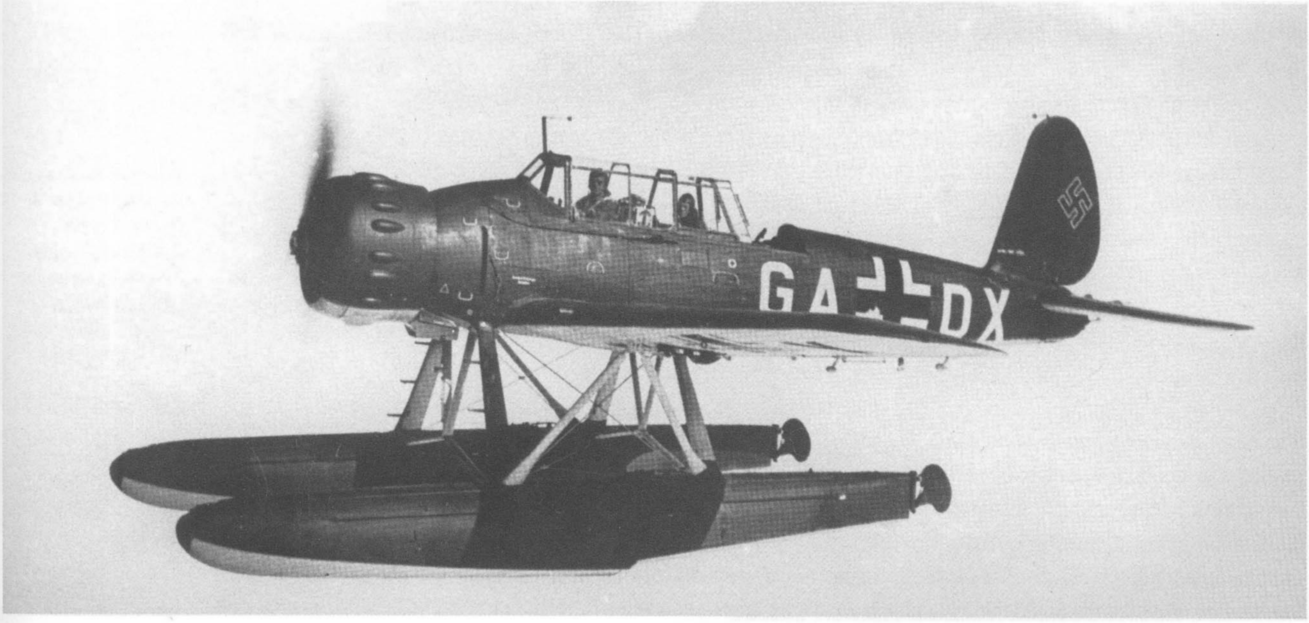


The Dornier Do 18 flying boat played a significant role in early wartime reconnaissance duties with its long-range capabilities making it a valuable asset in the Wehrmacht inventory. In this pre-war view, the aircraft appears to be under tow while servicing personnel attend to the dorsal gun position and the aft-mounted Jumo diesel engine.

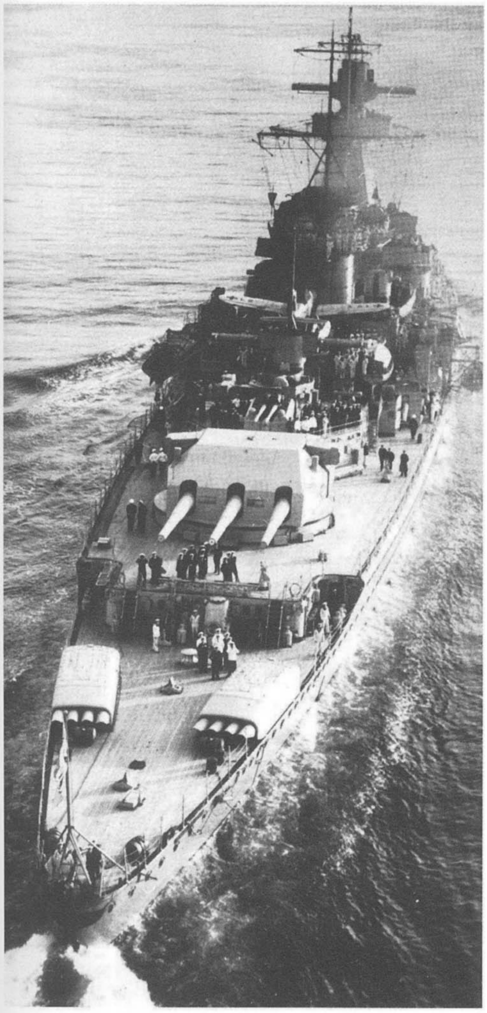


Dornier Do 18, 60+B42 of the 2./KFlGr.406

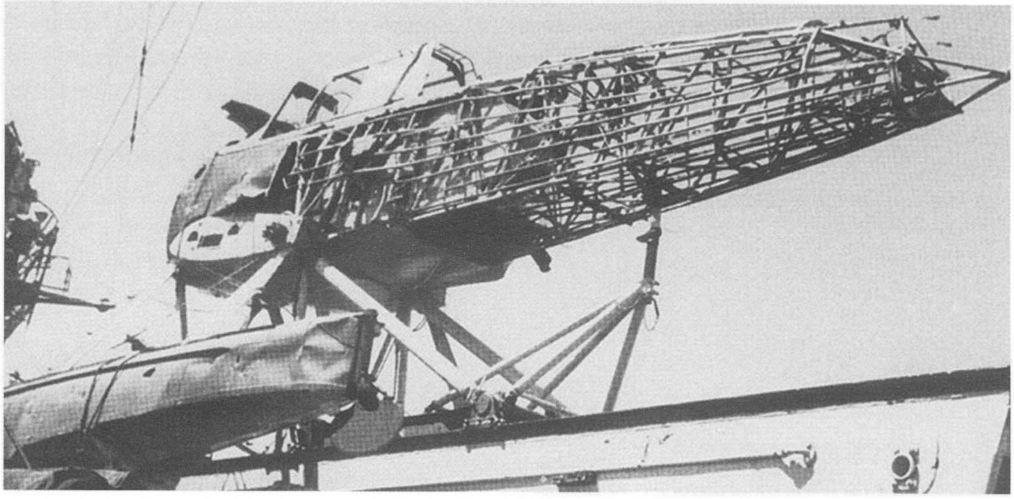
Finished in overall grey 63, 60+B42 carries the earlier, narrow style of Balkenkreuz with the thin outer black edging to the white sections, black fuselage codes, and the swastika-adorned red and white Reichsflagge marking painted across both the fin and rudder. The propeller blades are bare, polished metal with the old style tip bands painted in the national colours of red, yellow, and black. The Staffel emblem consisting of a mailed gauntlet on a blue, red, and yellow diagonal background within a shield is carried on both sides of the forward engine cowling. The white diagonal lines painted beneath the cockpit side window are sighting lines for use with the observer's hand-held camera.



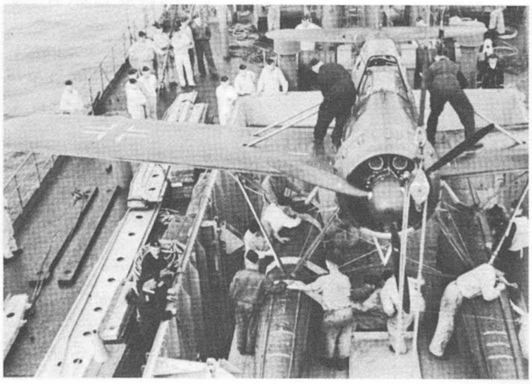
A factory photograph of the Warnemünde-built Arado Ar 196 A-2 GA+DX, W.Nr.100124. The A-2 was the first production variant to be fitted with forward-firing weapons that consisted of a single 7.9 mm MG 17 machine gun mounted in the starboard fuselage lower side and a 20 mm MG FF cannon in each wing.

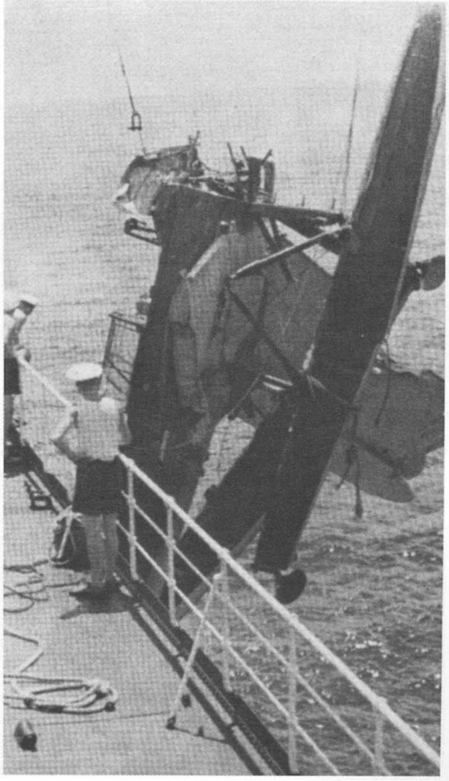


Aerial view of the stern of 'Admiral Graf Spee' taken in April 1939 as she passed through the English Channel en route to the Atlantic to carry out exercises with the battle cruiser 'Gneisenau', the cruisers 'Admiral Scheer' and 'Deutschland' and other Kriegsmarine units. Visible on the catapult abaft the funnel can be seen an Arado Ar 196 A-1. Although the complete code painted on the top of the wing is indistinct, the visible L2 positioned inboard of the Balkenkreuz on the port wing suggests that the aircraft, which is wearing an overall 63 finish, was from Lehrgeschwader 2.



Above: The burnt-out fuselage of one of the two Arado Ar 196 A-1 floatplanes carried by 'Admiral Graf Spee' sits forlornly on its catapult as she lies at anchor in Montevideo harbour following her running battle in the South Atlantic with the three Commonwealth cruisers, HMS Ajax, HMS Exeter and HMNZS Achilles in mid-December 1939.



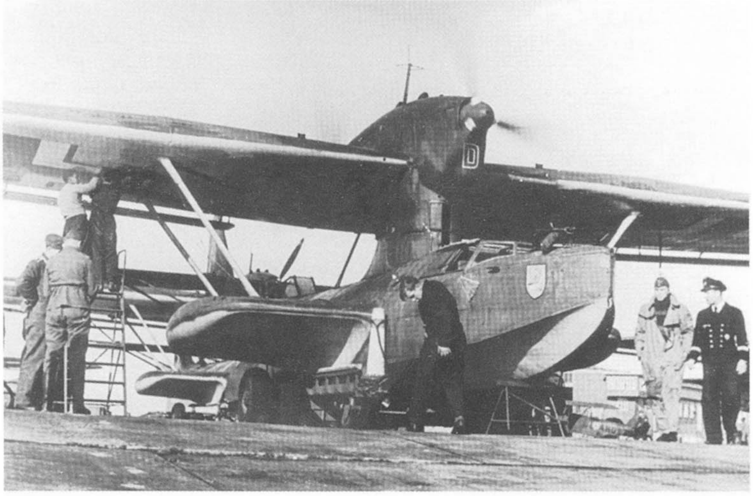


Above and right: Arado Ar 196 A-1 carried by the German surface raider 'Komet' is seen here being assembled within its crate-like stowage somewhere in the Pacific Ocean on 2 October 1941. During its take-off run a short while later, the aircraft somersaulted, severely injuring the observer Oblt.z.See Lindemann, requiring him to be repatriated to Germany via Japan for treatment. Although the 'Komet' later retrieved the wreckage of the Arado, its ultimate fate is unknown.

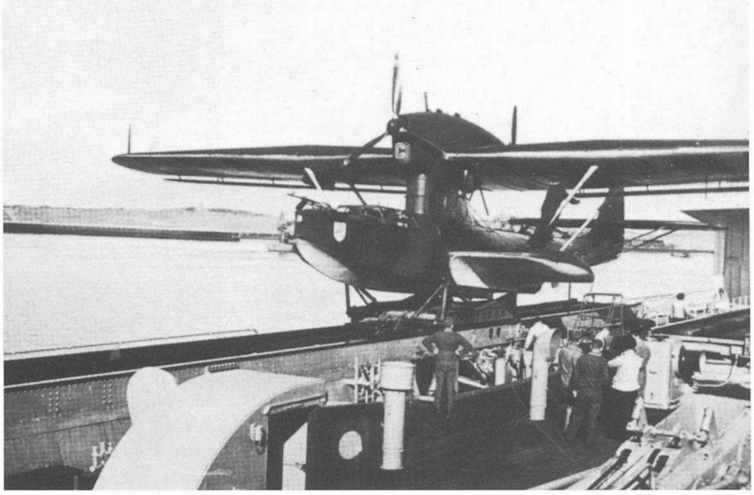
for *Kriegsmarine* surface vessels such as *Bismarck, Admiral Graf Spee, Karlsruhe, Scharnhorst* and *Tirpitz.* Additionally, the unit also supplied aircraft and crews for the *Hilfskreuzer*[6] such as *Pinguin, Atlantis,* and *Widder.* Initially equipped with the Heinkel 60 seaplane, by the outbreak of war the more modern Arado Ar 196 was increasingly employed by the *Staffel.* However, by the end of the war and as with those aircraft operated by the *Küstenfliegerstaffeln,* the Arado was considered out-dated and suffered increasingly at the hands of Allied air patrols.

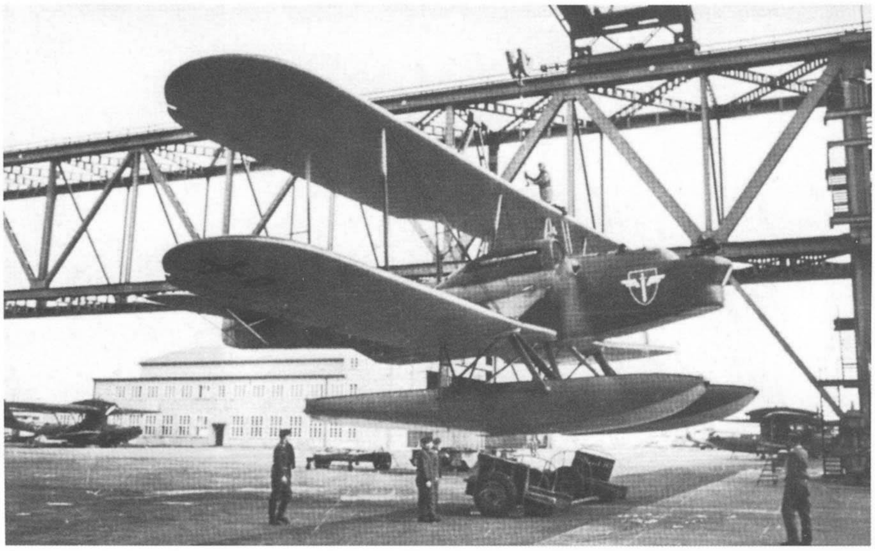
Not only were aircraft left in service too long to prove competitive in the air war, but Germany also employed certain designs in roles for which they were wholly unsuited. In October 1939, *KFlGr.*806[7] was equipped with the Heinkel He 111 J which, although of sturdy design, was mechanically unreliable and unsuitable for long-distance flights over water. So unsuitable was the aircraft that the *Seekriegsleitung*[8] noted in 1939, '*No responsible command should assign the He 111 J any longer to operations over the sea.*' Likewise, the improved He 111 H series received scathing reviews. In 1940, the *Gruppenkommodore* of *KFlGr.*606, *Major* Joachim Hahn, was of the opinion that even the more up-dated He 111 H, with more reliable and powerful engines was unsuitable for maritime aviation operations. Although by 1940 this *Gruppe* was comprised of the usual three *Staffeln,* only the 2. *Staffel* was a maritime aviation unit and was equipped with the Dornier Do 18 flying boat. The remaining units had all been equipped from their formation with Dornier Do 17 Z land-based bomber aircraft. While such aircraft provided better performance and load-carrying characteristics, the Do 17s were still inadequate for the role of maritime air support. *Major* Hahn was of the opinion that, while the Do 17 was a much better aircraft than the He 111, the Junkers Ju 88 was the more preferable for such operations. However, so revolutionary was the design and so stubbornly obstructive was Hermann Göring, that it was not until 1941 that two of the *Küstenfliegerstaffeln*, the 2./506 and

A hive of activity surrounds this Dornier Do 18D K6+DL of the 3./KFlGr.406 on the slipway at its home base of Hörnum on the island of Sylt in late 1939. Visible on the bow of the aircraft is the Staffel emblem of a black and white whale superimposed on a map of Sylt with its lighthouse at the southern tip. The individual letter D on the front of the pylon is black with a yellow outline.



This view of a catapult-mounted Dornier Do 18 D, K6+CL of the 3./KFlGr.406 is said to have been taken near its home base at Hörnum on the island of Sylt in May 1940 from where the Staffel carried out patrols over the North Sea. It carries its aircraft letter of C in the Staffel colour of yellow on the forward portion of the lower cowling. On the bow is the whale and island emblem, which it inherited from the 2./KFlGr.306 when it was re-formed from that unit in October 1939.





Seen at either Pillau or Norderney in the opening months of the Second World War shortly before the Staffel converted to the Heinkel He 115, a Heinkel He 59 B-2 of the 3./KFlGr.506 with engines running is hoisted from its beaching trolley by a large overhead crane. The winged sword emblem is understood to have originated in October 1936 when the 3./KFlGr.106 was formed from the 3.(Mz)/Fliegergruppe (See) 106. Retained when the Staffel re-formed as the 3./KFlGr.406 in July 1937, it remained with the Staffel when it re-formed as the 3./KFlGr.506 in October of 1939. From mid-October 1941, the Staffel was known as the 3./KGr.506 and in June 1942 was renamed as the 9./KG26.

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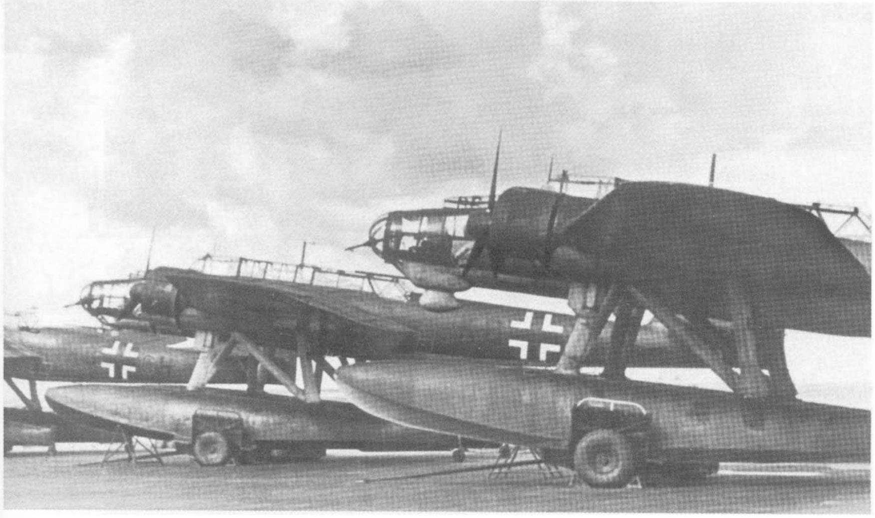
[6] Auxiliary Cruisers/Commerce Raiders.

[7] Later to become *Kampfgruppe 806.*

[8] Naval War Staff.



Believed to have been taken at Tromsö circa 1941, Heinkel He 115 Cs of the 1./KFlGr.406 are seen here lined up on their beaching trolleys under a threatening sky. The only full code visible on the original print is that of K6+CH on the farthest aircraft.

With its floats fitted into wheeled dollies, S4+DH, a Heinkel He 115B of the 1./KFlGr.506, sits on a rainswept hard-standing alongside an unidentified Dornier Do 18.

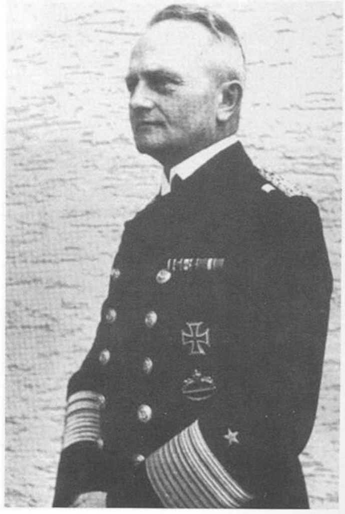
2./906, received the aircraft – and even then, only for a limited time. While *Küstenfliegergruppen* 606 and 806 began converting to the type in late October 1939 and August 1940 respectively, this reflected the change in the units' operational assignment as both were renamed as *Kampfgruppen*[9] and taken over by the *Luftwaffe* at the time of their conversion.

The oldest design still in front line service with the *Küstenfliegerstaffeln* in 1939 was the Heinkel He 59 float seaplane. First built in 1930 and designed by Reinhold Mewes, the aircraft was a twin engine, open cockpit biplane design. Although it could carry a one ton payload of mines, bombs or a single torpedo, it was slow and of limited range. However, in September 1939, it was the only true, multi-purpose maritime aircraft that Germany had in any quantity. The only other long-range aircraft available in sizeable numbers, the Dornier Do 18 flying boat, was unable to carry much in the way of payload and had no provision for carrying torpedoes or mines. There was, however, a single *Staffel* of Heinkel He 115s belonging to the 1./*KFlGr.*406 available for operations. Without doubt, the most effective of the German attack and reconnaissance floatplanes, the aircraft was capable of ranging over 3,000 kms (1,864 m) and could carry a maximum payload of bombs, mines, or a torpedo up to 1,250 kg (2,750 lbs). Although at the beginning of September 1939 only the 1./406 was equipped with this aircraft, during September and October several more *Staffeln*, including all three combat *Staffeln* of *KFlGr.*506, began receiving and converting to the new aircraft. Despite its superiority over other German maritime aircraft designs, Raeder was of the opinion that the aircraft was already outdated by the time of its delivery to front line units.

For the *Kriegsmarine,* the lack of modern, long-range maritime aircraft often restricted operations and caused unnecessary losses, especially in the U-boat campaign where detailed reconnaissance of enemy naval forces was of paramount importance. As early as 30 October 1939, the *Kriegsmarine* was forced to admit that of the 56 Do 18s then available, their operational employment had seen a total patrol coverage of some 500,000 kms (310,685 m) – little more than 150 kms (93.20 m) per aircraft per day. Furthermore, ten aircraft had been lost, with replacement figures of just three per month. '*Therefore,*' *Admiral* Alfred Saalwächter, *Oberbefehlshaber des Marinegruppe West*[10] was to later remark, '*no increase in the numbers of planes available can be anticipated.*' Compounding matters, the aircraft then operating in the maritime role were, in every respect, inferior to anything they were likely to meet as fielded by RAF Coastal Command.

To reduce the risk of interception or mechanical failure the majority of long-range maritime operations were seldom flown by individual aircraft in known areas of high enemy aerial activity. In such areas, operations were usually flown using at least six aircraft in what was termed a *Fächeraufklärung*[11]. This was a search system designed to cover as broad an expanse of water as possible, while at the same time providing a concentration of aircraft if the need for rescue or an attack on enemy shipping arose. Starting from a fixed point, the aircraft fanned out on a similar flight plan, but instead of operating in a tight formation as bomber aircraft did, those involved in a *Fächeraufklärung* spread to the limits of aircrew visibility. In this way, broader areas of

Admiral Alfred Saalwächter served as Oberbefehlshaber des Marinegruppe West until 20 September 1942. Resigning from active service on 30 November of that year, he was captured by the Russians at the end of the war. Wrongly convicted of war crimes by a Soviet military tribunal and sentenced to death, he was reportedly executed by firing squad on 6 December 1945.



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[9] Bomber Groups.

[10] Commander-in-Chief, Marine Group West.

[11] Fan search.

Luftwaffe Order of Battle for Maritime Aircraft, September 1939

Führer des Luftstreitkräfte, West

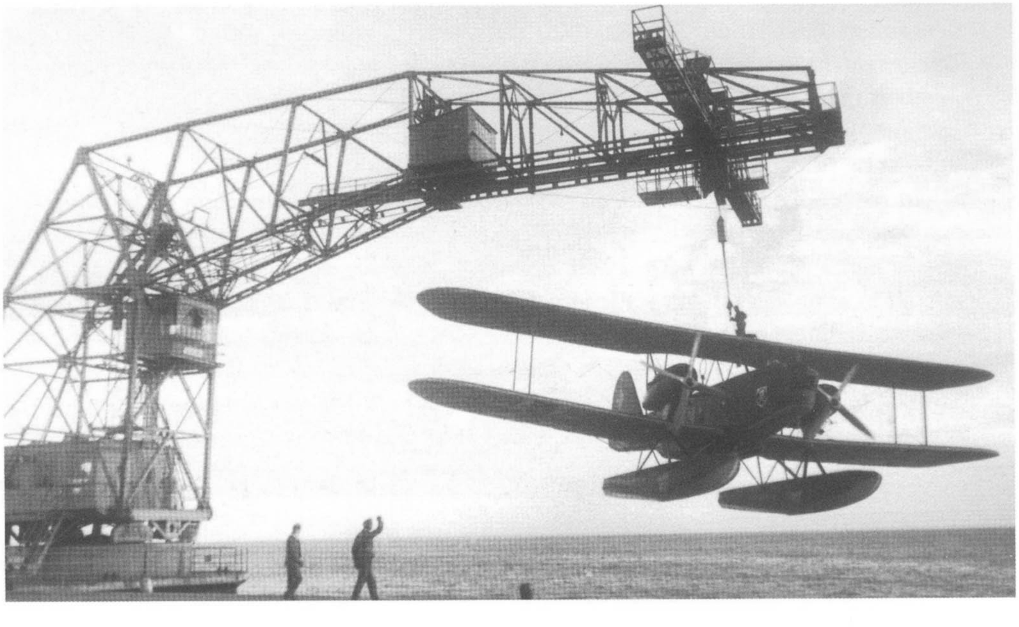
Unit	Location	Commander	Aircraft	Strength/Serviceable
Küstenfliegergruppe 106		*Obstl.* Jordan		
1./KüFlGr.106	Norderney	*Hptm.* von Schrötter	He 60	10/10
2./KüFlGr.106	Norderney	*Obstl.* Bischoff	Do 18	12/12
3./KüFlGr.106	Borkum	*Major* Horn	He 59	10/10
Subordinated:				
3./KüFlGr.706	Norderney	*Hptm.* Stein	He 59	12/12
Küstenfliegergruppe 306		*Obslt.* von Helleben		
2./KüFlGr.306	Hörnum	*Hptm.* von Roth	Do 18	12/11
Subordinated				
2./KüFlGr.506	Hörnum	*Hptm.* Hartwig	Do 18	12/11
2./KüFlGr.606	Hörnum	*Hptm.* von Laue	Do 18	12/9
Küstenfliegergruppen 406		*Major* Minner		
1./KüFlGr.406	List	*Hptm.* Weisand	He 115	8/8
2./KüFlGr.406	List	*Major* Bartels	Do 18	12/10
3./KüFlGr.406	List	*Hptm.* Bergemann	He 59	9/9
Subordinated				
1./Bordfliegergruppe 196	Wilhemshaven	*Major* Lessing	He 60	12/12

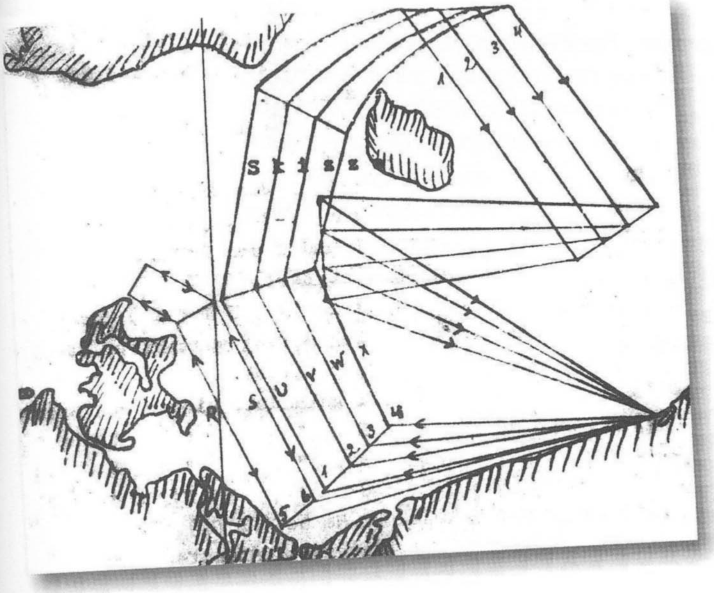
Führer des Luftstreitkräfte, Ost

Unit	Location	Commander	Aircraft	Strength/Serviceable
Küstenfliegergruppe 506		*Obstlt.* von Wild		
1./KüFlGr.506	Pillau	*Hptm.* Busch	He 60	12/11
3./KüFlGr.506	Pillau	*Hptm.* Fehling	He 59	10/9
Küstenfliegergruppe 706		*Obstl.* Edert		
1./KüFlGr.706	Nest	*Major* Kaiser	He 60	12/11
Subordinated				
1./KüFlGr.306	Nest	*Hptm.* Heyn	He 60	12/11
5./BFlGr.196	Kiel-Holtenau	*Hptm.* Wibel	He 60	10/10

The Staffelkapitän of the 1./KFlGr.506, Hptm. Busch, photographed at Pillau at the outbreak of war in September 1939.

Heinkel He 59 B-2, M2+RW of the 3./KFlGr.106 is hoisted ashore by crane. Visible beneath the cockpit is the Staffel emblem consisting of a skull and crossbones on a black disc carried within a white shield, which it inherited from the 3./KFlGr.206 in April 1937. As the last letter of the Verbandkennzeichen for the 3./106 was L, the reason for the presence of the letter 'W' in its place is unknown.





A diagram of the routes of a Fächeraufklärung (Fan search) as carried out by six Heinkel He 60s of the Nest-based 1./KFlGr.706 on 16 September 1939. The letters R, S, U, V, W and X are the individual aircraft letters while the numbers 1 to 6 identify the specific courses followed by each aircraft.

Although its identity is not known with any certainty, the Dornier Do 18 seen here is believed to be either W.Nr.0732 of the 2./KFlGr.506 or W.Nr.0804, K6+DL of the 3./KFlGr.406. Both aircraft were brought down off the north-east coast of Britain by Lockheed Hudsons; W.Nr.0732 by an aircraft from 224 Sqn RAF on 8 October 1939 and W.Nr.0804 by two Hudsons of 220 Sqn RAF on 10 November 1939. In both instances, the Dornier crews were rescued by passing shipping with the exception of Oblt.z.See W. Lütjens from the second aircraft who was reported as missing.

the sea were covered with the limits of visibility of one crew interlocked with those of the crews of the other aircraft in the formation. Although this achieved the desired outcome of mutual protection and an increase in the reconnoitred area, the system proved both inefficient and wasteful in terms of aircraft employment and fuel consumption. Even when such searches found enemy naval activity, it was not always possible to redeploy aircraft in the region for a concentrated attack in a timely or co-ordinated fashion.

Early on the morning of 7 November 1939, six aircraft of the 1./*KFlGr.*106 set out on a *Fächeraufklärung* of the lower North Sea region. At about 1000 hrs and approaching the end of the patrol, *Leutnant zür See* Happe, flying in M2+IH, spotted an enemy submarine cruising on the surface, escorted by a single destroyer. Closer inspection revealed a second submarine in the area. Reporting his find, Happe and his crew moved in to attack. The submarine in question was most likely HMS *Seal* rendezvousing with the destroyer HMS *Boadicea* that was acting as an escort for *Seal* and two other submarines – *L26* and *Cachalot* – which were returning to Portsmouth. Focusing on *Seal*, Happe made several attack runs against the submarine but was engaged by anti-aircraft fire from *Boadicea;* despite this, Happe was able to release a stick of bombs in two attacks against his target. Although he was convinced that *Seal* had been damaged, it did not sustain any damage during the engagement but did report being attacked by a seaplane which dropped three bombs at 1035 and 1037 hrs whilst in approximate position 52º00 N/02º05 E (Happe noted the engagement took place in Qu.8484); neither *L26* nor *Cachalot* were attacked.

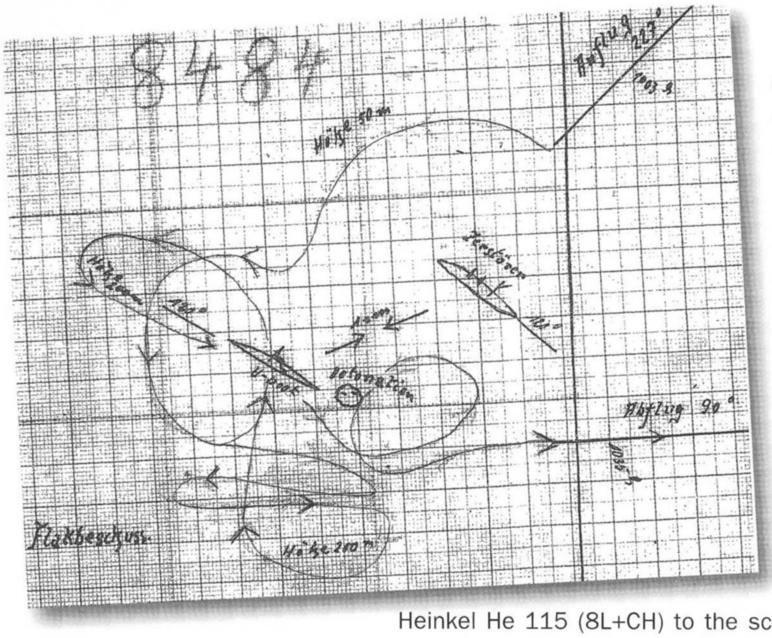
While a second aircraft was brought to the area by Happe's radio report, they were unable to attack with any effectiveness due to the worsening weather conditions and the alertness of the British anti-aircraft gunners. The operation proved just how difficult action in obsolete aircraft against alert enemy

After action report by *Lt.z.S.* Happe, 7 November 1939

On 7.11.39, I flew in 'IH' as Number 6 in a Fächeraufklärung undertaken by the 1./106. As I approached the end of my patrol, I saw at about 1002 hrs in Qu.8484 an English destroyer, probably of the G Class, on a course of 120°. I flew a course around the destroyer, and noticed a submarine close by and a second submarine further away. I reported this over the radio.

I continued circling around the submarine to assess its nationality. I was able to recognise the English war flag. (It was assumed the submarine was probably of the 'Thetis' type.) However the sea mist and Flak caused havoc with identification as it hindered my approaches. On my third approach I came in from a height of 200 metres and dropped a brace of 250 kg bombs. The first two bombs landed about 40m from the submarine and the third, only 10 m away. Due to the fusing, this bomb exploded about 15 - 20m from the boat.

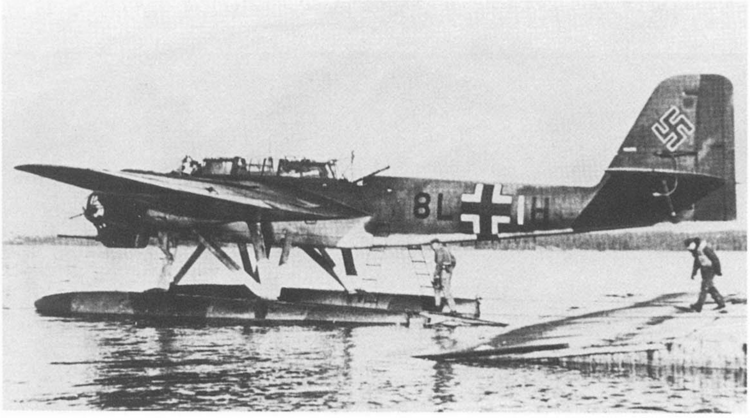
After releasing the bombs a curved track to port was flown in order to assess the effect of the bombs. At the end of this track I noted the submarine was half submerged. By the time we returned to the bomb sight, the boat was already submerged. A large oily patch was noted on the surface where the boat had submerged. Due to failing weather, we could not stay in the area much longer and we had already lost sight of the destroyer (visibility was only 2 - 3, if that). At 1035 we abandoned our patrol.



A sketch by Lt.z.S. Happe of the course of his attack on the Royal Navy minelaying submarine HMS Seal on 7 November 1939.

crews could be. However, Happe's lack of success against *Seal* was not something the crews of the 5./*BFlGr.*196 experienced when their turn came some five and a half months later. With more modern aircraft at their disposal, on 5 May 1940 two patrolling Ar 196 aircraft, 6W+IN (*Leutnant zür See* Gunther Mehrens) and 6W+EN (*Leutnant zür See* Karl Schmidt) spotted HMS *Seal* moving at slow speed on the surface of the Kattegat. Although *Seal* had been damaged by a premature detonation of one of the mines she had been laying, the concerted attacks by Mehrens and Schmidt convinced the British captain to surrender his vessel. With the submarine now hove-to, Mehrens instructed his pilot to land alongside the damaged vessel while Schmidt returned to Aalborg to lead a Heinkel He 115 (8L+CH) to the scene. The observer of the He 115, *Leutnant zür See* Nikolaus Broili of the 1./906, eventually completed the capture of the British submarine, which was subsequently towed into Friedrichshafen by the armed trawler UJ.128 of the 12th Anti-submarine Flotilla.

Heinkel He 115 C, 8L+CH of the 1./KFlGr.906 whose Staffel emblem of a stylised singing bird a black-bordered gr shield is visible on t nose. Wearing standard maritime camouflage with the aircraft letter C app in the 1.Staffel colou of white, what appe to be a yellow theat band has been appl around the rear fuselage to appear as if it is behind the Balkenkreuz. Althou wearing the same c as the He 115 involv in the capture of HMS Seal, it is not known if this is, in fa the same aircraft.



Below: The crew of Heinkel He 115 C-1, 8L+IH of the 1./KFlGr.906 prepare to board their aircraft in preparation for a sortie from Santahamia, Finland on 8 October 1942. What appears to be a small white horizontal line on the fin, although illegible in this photograph is the aircraft Werknummer.

Such success as this was not always the case for the *Bordfliegerstaffeln*, nor was it limited to them. Repeatedly, the *Küstenfliegerstaffeln* proved that a determined crew could seriously damage, or even sink, enemy shipping caught by surprise. On 3 September 1939, in a combination of 35 sorties, both *KüFlGr.506* and *706* had succeeded in sinking several Polish naval vessels and severely damaging the coastal installations at Hela, a task the Junkers Ju 87-equipped 4./*Trägergruppe* 186[12] had failed to accomplish. Then, on 18 December 1939, the British fishing vessel *Active* (185 GRT) was sunk by an air-dropped torpedo north-north-west of Rattray Head – marking the first success of its kind by a He 59 floatplane during the Second World War. While successes with torpedoes were limited during 1939 and early 1940, the continued attacks on British shipping put pressure on the Admiralty to provide it with better protection.

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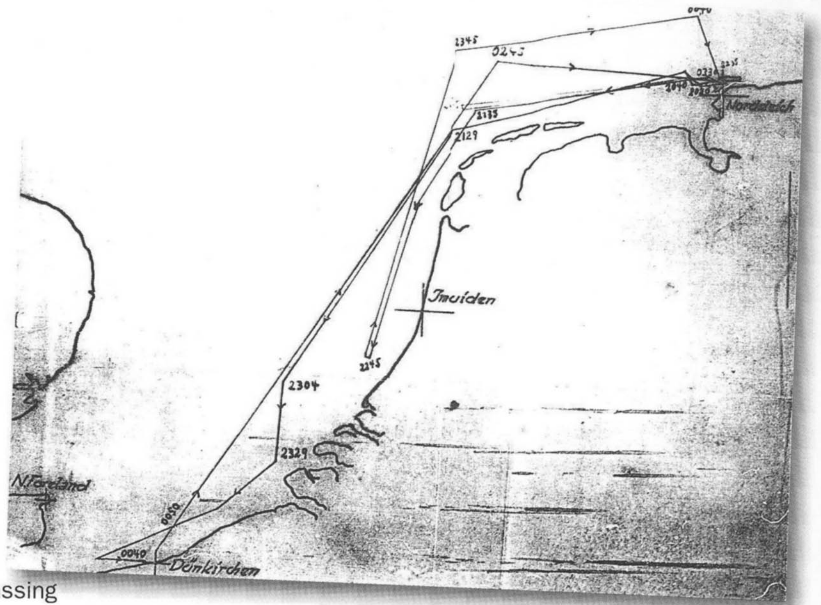
[12] 4th Squadron of Carrier Group 186, the dive-bomber unit intended for deployment aboard the planned aircraft carrier, *Graf Zeppelin*.



A diagram showing the extent of an early war mining sortie carried out by nine of the longer-ranging Heinkel He 59s of the 3./KFlGr.906 on the night of 22/23 November 1939 from their base on the East Frisian Island of Norderney, during which eight mines were laid in Dunkirk harbour. The aircraft involved in these sorties carried the individual aircraft letters of N, O, P, R, T, U, V, W and X respectively. Interestingly, both the 1. and 3./106 were also active that night, laying fourteen mines in the Thames Estuary and two in the waters of the Downs.

Direct operations against enemy shipping were just one of the ways the *Küstenfliegergruppen* was employed in the war at sea. At the onset of the war, *Generalmajor* Joachim Coeler was appointed *Führer des Luftstreitkräfte, West*[13]. An ardent supporter of aerial mining, Coeler set about the task of neutralising enemy shipping through this means with vigour and both the *Kriegsmarine* and *Luftwaffe* were optimistic for Coeler's mining operations. However, problems with delivery and low stocks of weapons hampered any serious attempt made at employing the aerial mine during 1939 and early 1940.

Germany used four types of magnetic mine, the LM/A, LM/B, LM/C and LM/F, which, unlike most other mines, were not set off by contact but by the magnetic field of a passing ship. In this way, the weapon became virtually undetectable as it sat below the surface of the water. For this reason, both types were ideally suited for mining harbours and estuaries where shipping traffic was high. However, production of the weapons had only been under way since February 1939 and, although 1250 LM/A and 1150 LM/B mines were on order by September, by the onset of war only 143 had been delivered.

To confound matters, the only aircraft available to sow the mines were two *Staffeln* of He 59 seaplanes. Thus, the *Oberkommando der (Kriegs) Marine*[14] (*OKM*) was loath to commit the weapon immediately and it would not be until 18 November that a sufficient stock of mines had been assembled.

The primary targets originally selected for the German mining campaign were the Thames and Humber estuaries. However, as the campaign progressed, the scope of the operation widened to include the major coastal British shipping routes. On the night of 20-21 November 1939 aircraft of the 3./*KFlGr.*906 flew the first German mining sorties. On that day, the unit's war diary noted that nine sorties were launched from Norderney between 1635-1700 hrs under the tactical command of *Staffelkapitän, Hauptmann* Gert Stein. However, bad weather over the North Sea played havoc with navigation and only three of the aircraft managed to sow mines in the Thames estuary and the approaches to Harwich.

To deploy aerial mines properly, crews were instructed to fly slowly at an altitude of between 400 and 800 m (1312 to 2624 ft). This placed a great demand on the skill of the pilot and as a result, mining operations usually only took place on moonlit nights. So as not to foul the mine, their parachutes were attached by a solid piece of salt, which, once in the water would dissolve and allow the parachute to be carried clear by the tidal flow. Ideally, once laid, the mines were supposed to sit between 5 to 8 m (16 to 26 ft) below the surface but if laid in too shallow a depth, they were supposed to self detonate.

Generalmajor Joachim Coeler, Führer des Luftstreitkräfte, West from 30 June 1939. On 2 February 1940, he became commander of the 9. Fliegerdivision and in November 1940 was appointed commander of the newly created IX. Fliegerkorps. He ended the war with the OKL Führer-Reserve in Luftflotte Reich. He died at Garmisch-Partenkirchen on 14 May 1955.

The navigational problems experienced by the 3./906 remained to plague future German mining operations along Britain's eastern coastline. On the night of 22-23 November, an aerial mine was seen being dropped into shallows in the Thames Estuary off Shoeburyness, from where it was eventually recovered by the British. The magnetic mine created such alarm that almost immediately a committee was set up within the Air Ministry to discuss the effects of aerial mining on British shipping and possible countermeasures. Aside from the physical losses inflicted, the aerial mining campaign was forcing a redirection of valuable manpower and resources away from other theatres of operations in order to clear minefields and sunken ships from ports and shipping lanes. Even though only 68 mines had been sown over a three-week period, one estimate noted that they were responsible for sinking up to a quarter of a million tons of shipping. The successes achieved by such a small number of mines led many within both the *Oberkommando der*

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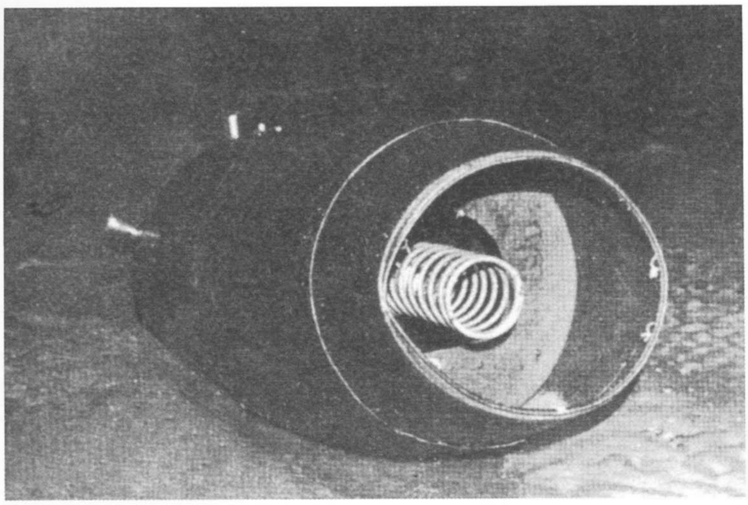
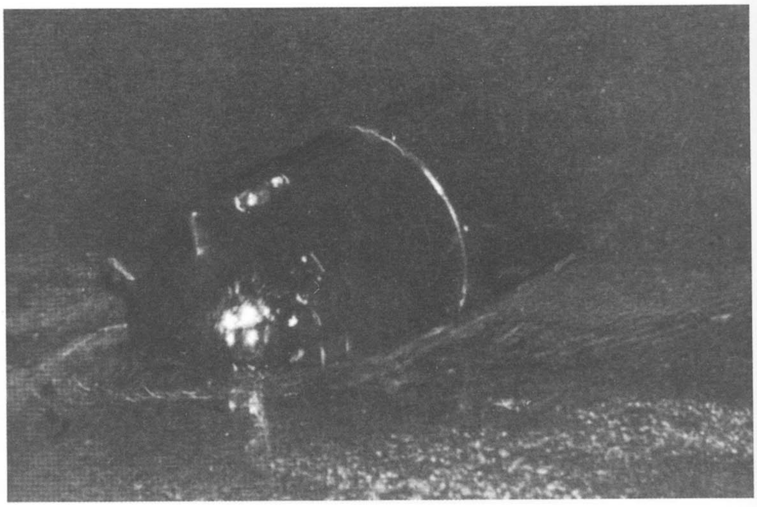
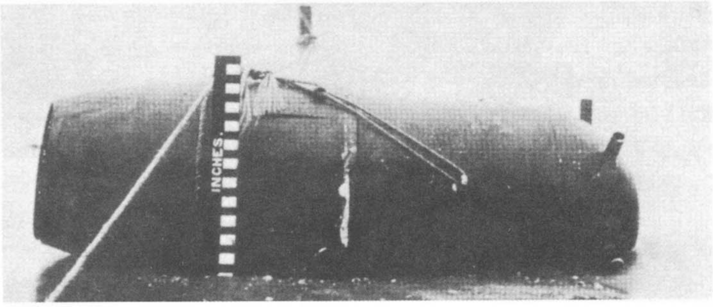
[13] Commander in Charge of Air Operations, West.

[14] Navy High Command.







Three views of the mine recovered from the shallow waters of the Thames Estuary off Shoeburyness on 23 November 1939. Subsequently disarmed by a Royal Navy team led by Lt Cdr John Ouvry and removed for further inspection, it is currently on display on board the Town-class cruiser HMS Belfast, now moored on the River Thames opposite the Tower of London. Interestingly, as Lt. Cdr. Ouvry's party waded out to the mine for a second time that November morning, the ebbing tide uncovered a second, identical mine some 300 yards (274.32 m) away.

Wehrmacht[15] and *OKM* to push for a greater and more dedicated approach to aerial mining. However, the strain on the *Küstenfliegergruppen* was already beginning to tell.

Between 20 November and 7 December 1939, the *Küstenfliegergruppen* flew a total of six mining operations, dropping a total of 46 LM/A and 22 LM/B mines with twenty-seven mines being laid in the Thames and Humber estuaries and the Downs, off the east Kent coast, on the night of 6-7 December alone. However, accidents and combat losses had eroded the serviceability levels of these *Staffeln* and led the *OKM* to question the reliability and ultimate usefulness of the aerial mining campaign as a whole. At the end of November, *Generalmajor* Hans Ritter, *General der Luftwaffe beim Ob.d.M*[16], protested strongly at the campaigning, claiming it was unnecessarily sapping German air strength to no good end. The icing up of seaplane stations along the Baltic coastlines during December only exacerbated the situation.

During the first ten months of the war, of the 2,250,000 tons of British mercantile shipping sunk by German operations, twenty-six per cent had succumbed to mines.[17] The German fighter ace, Adolf Galland, later claimed that had the *Luftwaffe* concentrated all its efforts to that end, Britain might well have been brought to her knees, since her endurance without imports was only about six weeks. Notwithstanding such speculative estimation, during the first ten months of the war worldwide British mercantile losses touched 280,000 tons per month at a time when new building capacity was only about 88,000 tons. Even worse for the British Admiralty was that during this same ten month period, *Küstenfliegergruppen* aerial torpedo forces had accounted for some 37,845 tons.

Although the *Luftwaffe* was keen to build up its own maritime air service, until 1941 the *Küstenfliegergruppen* was responsible for torpedo operations, but hampering this responsibility was a lack of aircraft capable of carrying and launching air-dropped torpedoes. At the start of the war, there had been 30 operational He 59s divided between four *Staffeln,* and although all could carry torpedoes, very few did so, due primarily to the low number of torpedoes available. By 1940, the introduction of the He 115 and an improved air-dropped torpedo allowed the *Küstenfliegergruppen* more opportunities to engage in aerial torpedo operations against enemy shipping. However, it was not until July 1940 that the first torpedo-equipped *Staffel*, the 3./506 based at Stavanger, was operational with the weapon. Up until this point, although torpedoes were used by all of the He 115 or He 59-equipped *Staffeln*, it had not been a regular choice of weapon. Following the conversion of the 3./506 into a fully torpedo-equipped unit, in August 1940 it was joined by the only other operational torpedo-equipped *Staffel,* the Norderney-based 1./106.

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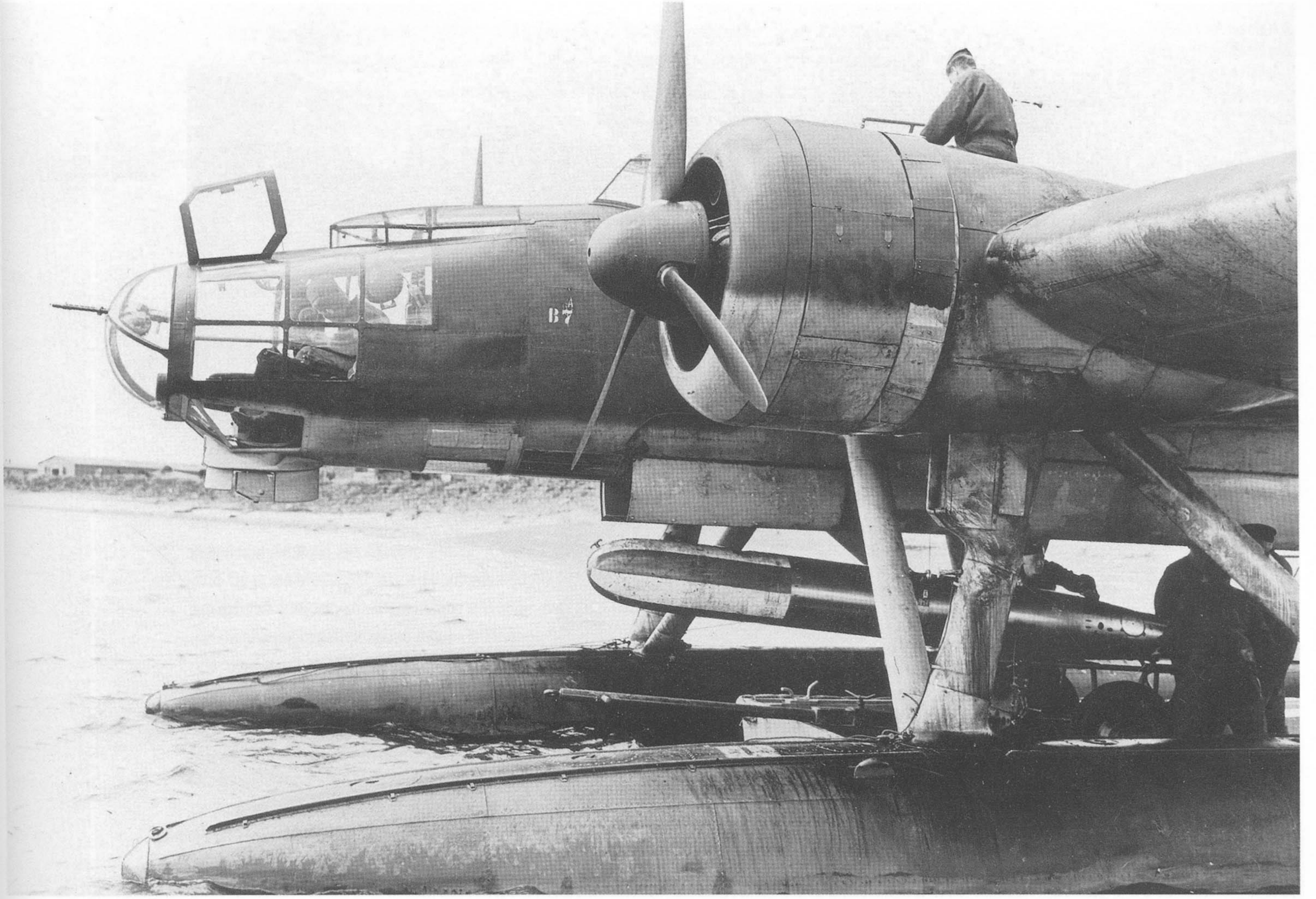
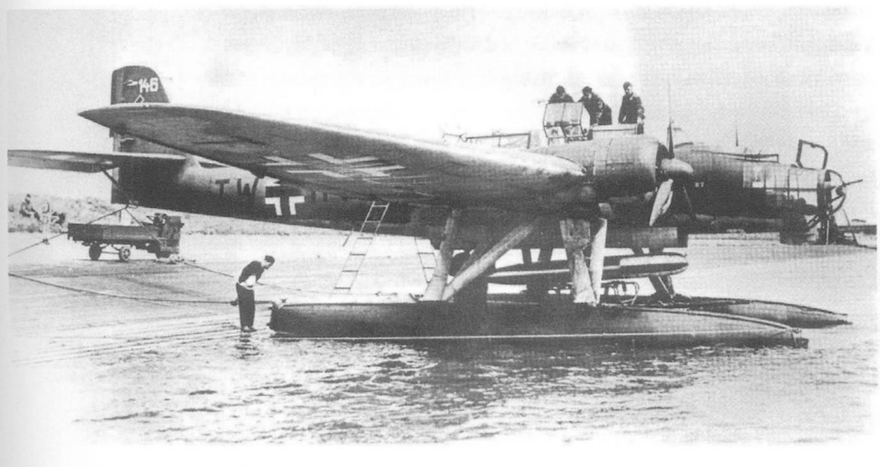
[15] High Command of the Armed Forces.

[16] *Luftwaffe* liaison officer with the *Kriegsmarine*.

[17] The figure quoted for mines includes mines sown by U-Boats, surface vessels and aircraft and therefore cannot be considered a uniquely *Luftwaffe* success.

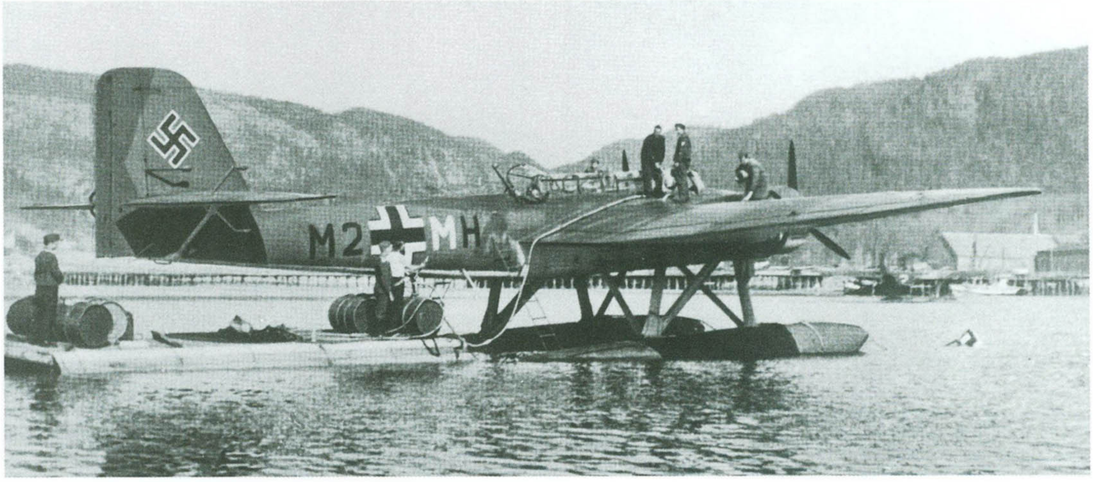




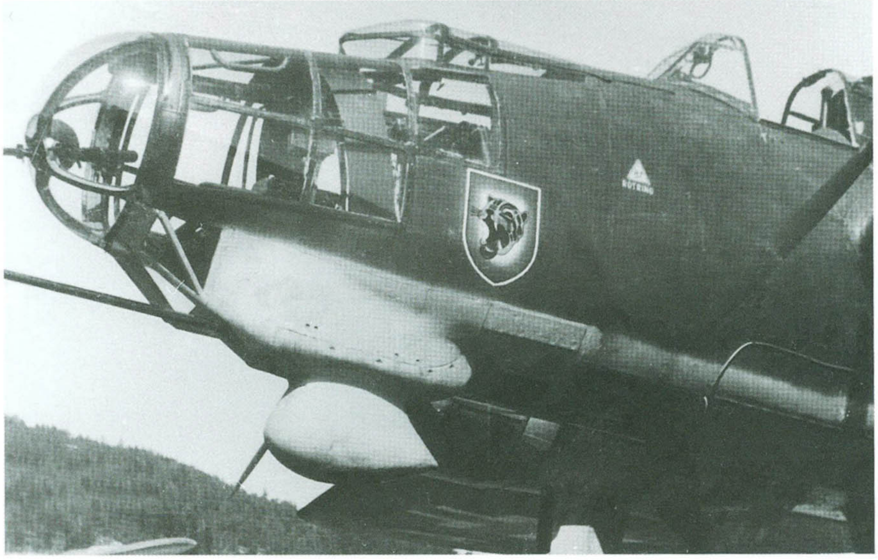
Possibly taken at the Erprobungsstelle (See) at Travemünde, these two views show a practice torpedo being loaded into a Heinkel He 115 B-1. Wearing a four-letter Stammkennzeichen beginning with the letters TW, it is not known at this time if the 146 painted on the fin relates to the aircraft W.Nr. if it had something to do with a trials programme.

The first successes of the He 115 *Staffeln* may have been the sinking of the *Llanishen* (5,035 GRT) and the *Makalla* (6,680 GRT) of Convoy CA 203 in the Moray Firth on 23 August 1940, although some sources put their loss down to bombs rather than torpedoes. The first confirmed He 115 success was the sinking of the *Remuera* (11,445 GRT) by elements of *KFlGr.*506 on 26 August 1940. These successes, combined with others, moved the *OKM* to issue its congratulations to the *Küstenfliegergruppen* for sinking during torpedo operations what it understood to be 100,000 tons of shipping since the start of the war. This enthusiasm guaranteed the continued use of the weapon by the *Küstenfliegerstaffeln*, although conventional bombing attacks were still quite usual.

In 1941, the *Küstenfliegerstaffeln* carried on as it had before, with its primary focus of operations over the North Sea and Atlantic Ocean. It was not until September 1941, with the rapid German advances in Russia, that the first units moved east. On 21 September, both the 2./506 and the 2./906 re-deployed from their bases in the West to Riga in order to participate in the upcoming attacks on the Estonian Islands. This move had been preceded by a conversion to the land-based Ju 88 bomber. As the Ju 88 models in service at this time had no capacity to carry torpedoes operationally, attacks on enemy shipping made by these units were carried out using conventional bombing loads. However, such attacks were limited as the units were both employed primarily on reconnaissance operations. On 19 October 1941, with *KFlGr.*506 already operating as a standard bomber group with



A Heinkel He 115 B-1 coded M2+MH of the 1./KFlGr.106 is seen here being refuelled from large drums lashed to what appears to be a makeshift pontoon. Although unknown, the location is thought likely to have been either Stavanger or Trondheim-Hommelvik circa mid 1940.



Close-up view of the nose of a Heinkel He 115 C of the 2./KFlGr.506 displaying the tiger's head emblem, which was adopted when the Staffel moved to Brest-Süd in December 1940.

all three *Staffeln* flying the Junkers Ju 88, it was absorbed by the *Luftwaffe* and renamed *Kampfgruppe* 506. While the 2./906 was similarly operating the Ju 88, it was the only *Staffel* of the *Gruppe* so equipped and thus escaped reclassification, having returned to Brest-Süd and the He 115 on 6 October 1941.

The absorption of *Küstenfliegergruppe* 506 by the *Luftwaffe* marked a turning point in the *Kriegsmarine*'s air fortunes. During 1939, it had lost *Küstenfliegergruppen* 306 and 806, the former being disbanded, the later renamed *Kampfgruppe* 806; in 1940, *Küstenfliegergruppe* 606 was similarly absorbed into the *Luftwaffe*, while in 1941 both *Küstenfliegergruppen* 106 and 506 were absorbed, the former during May and the latter in October. With an increasing number of Arctic convoys sailing with aid from Britain to Russia, the *Kriegsmarine* was left with just seven flying *Küstenfliegerstaffeln* – not all of which were suitable for offensive operations – and the short-range capabilities of the *Bordfliegergruppe* 196. This left *Admiral Nordmeer*[18] to note glumly on 22 December 1941 that the number of aircraft available for distant reconnaissance in the Arctic was so small that between 1 and 15 December 1941 only two reconnaissance operations could be carried out. Even if reconnaissance had found suitable targets in the region, only the 1./706 and 1./906 were available for action.

By 1942, the only aircraft the *Küstenfliegerstaffeln* operated capable of a truly offensive role in the war at sea was the He 115 – the He 59 having been removed from front line service. The only other modern aircraft then in operation was the Blohm und Voss Bv 138 flying boat. As with its predecessor, the Do 18, the Bv 138 had no provisions for carrying torpedoes, although depth charges or bombs could be carried on suitably equipped aircraft. With only four of the eight remaining *Küstenfliegerstaffeln* able to operate against shipping effectively, it became difficult for the maritime flying units to involve themselves meaningfully in the air war at sea.

Further complicating matters, aiming torpedoes accurately was remarkably difficult for aircraft without the benefit of surprise. The torpedo-equipped seaplanes, due to their slow speed, were more vulnerable to AA fire. For a torpedo attack to be successful, the approach had to be made at low level and at a moderate speed,[19] releasing the torpedo at a range of approximately 1500 m (4921 ft). With slow approach speeds and long torpedo runs, success in such operations relied on little or no evasive action from the targeted ships. For this reason, successful torpedo attacks against heavily defended ships manned by alert crews were becoming increasingly rare.

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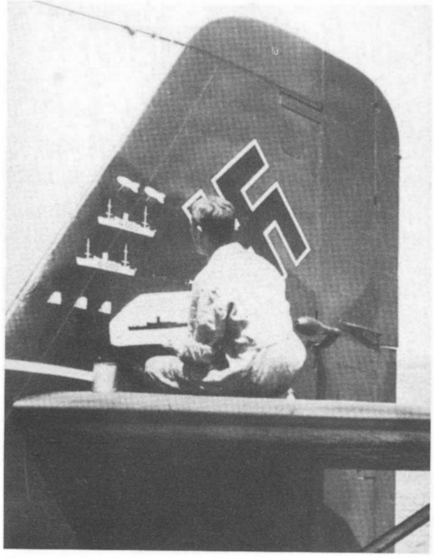
[18] Admiral, North Sea.

[19] For the F5b torpedo the drop speed was 250 +/- 10 kph, at an altitude of 40 +/- 10 m. For the F5W torpedo the drop speed was 300+/- 10 kph, at an altitude of 100 +/- 10 m.

The success achieved against shipping by German aircraft during the early part of the war convinced the Allies of the need to begin arming their merchant ships with defensive armaments. In addition, increasing numbers of naval escorts added further defensive firepower to ships sailing in convoy. To circumvent such defences, German crews began to institute a new formation, the *Goldene Zange*[20]. This involved a line abreast formation of torpedo bombers attacking from the beam and releasing their torpedoes simultaneously. Although providing for a greater chance of success and splitting defensive fire from defending ships, the manoeuvre still required precise timing. Even so, and despite the inherent risks in such operations, *Luftwaffe* analysis judged the torpedo to be the most effective means of sinking ships, with one vessel sunk for every eight sorties, compared to one for every 19 bombing sorties. For the few *Küstenfliegerstaffeln* based in the West, the opportunity to employ the *Goldene Zange* never arose, while for the He 115-equipped 1./706 and 1./906 in the Arctic – the only major air action against shipping in which they participated, the battle against PQ.17 – the convoy had already scattered before they joined battle. Thus, the only major success scored by the *Küstenfliegergruppen* was the torpedoing of the American freighter *Christopher Newport* (7,200 GRT) on 4 July 1942 by *Hptm.* Eberhard Peukart, *Staffelkapitän* of the 1./906.



A member of the ground personnel applies a victory mark to the fin of one of the Heinkel He 115s involved in the 1942 action against the ill-fated Arctic convoy PQ 17.

By mid-1942, the glory days of the *Küstenfliegergruppen* were past. Since early 1941, standing orders for *Staffeln* operating in the West stipulated that attacks along the enemy coastline were forbidden if complete surprise could not be achieved, while a dwindling number of aircraft and qualified aircrew, and difficulties with fuel supplies in the Arctic, meant operations were continually scaled back in favour of air operations by other branches of the *Luftwaffe*. This meant that by August 1942 the Admiralty's list of ships attacked by aircraft made no mention of maritime types – the increasing share of tonnage sunk being attributed to fighter-bombers. By the close of 1942, there were just six *Küstenfliegerstaffeln* left – the 2./906 having been disbanded on 11 April 1942. The dwindling fortunes of the *Küstenfliegergruppen* were not, however, shared by the *Bordfliegergruppe* 196.

Throughout the war, the *Bordfliegergruppe* 196 had operated in the role of short-range reconnaissance and anti-submarine warfare. For the most part, until 1943 its operations centred over the Baltic, Skagerrak, Kattegat and Norwegian Leads and North Sea. Those aircraft and crews of the 5./196 aboard ship obviously still performed reconnaissance duties, although their operational areas were dependent upon their parent ships' orders and own areas of operations. However, in 1943, with the *Kriegsmarine* suffering a shortage of major surface vessels, the 5./196 was redesignated as the *1.Staffel of Seeaufklärungsgruppe 128*. As the unit was not re-formed and with the transfer of the 2./196 during mid August 1943 to Venice, it was left up to the 1./196 to supply aircraft and crews for the remaining surface ships that employed them. These crews were relieved at intervals and assignment aboard ship became rotational. As the air and ground crews rotated, so too did the aircraft, flying from their bases at Aalborg-See in Denmark, until April 1944 when the Norwegian base at Horten was used. During September 1943, aircraft of the 1./196 from the major capital ships *Tirpitz*, *Scharnhorst*, and *Lützow* launched 42 sorties representing a total of 96 hrs, 45 mins flight time. This was over and above the 89 flights made by the 2./196 in the Mediterranean, which totalled 217 hrs and 10 mins.

With the sinking of *Scharnhorst* in December 1943, and the withdrawal of *Gneisenau* at around the same time, very few surface ships remained for the 1./196 to service. With the disbandment of the 2./196 during June 1944 – and of the last remaining *Küstenfliegerstaffel*, the 1./406, in October of that year – as well as the sinking of the *Tirpitz* on 12 November 1944, the remaining two *Staffeln* of the *Bordfliegergruppe* 196 returned to operations off the Norwegian coastline and over the Baltic. With Allied air superiority evident everywhere, operations were increasingly pressured and losses mounted. As a result, in March 1945 *Bordfliegergruppe* 196 was disbanded and its personnel and equipment sent to other ground and air units.

Although the *Bordfliegergruppe* 196 outlived its *Küstenfliegergruppen* brethren, it performed an equally important task for the *Kriegsmarine*. This task was one shared by the *Luftwaffe*'s own maritime air units, the *Aufklärungsgruppen* (*See*) and the *Seeaufklärungsgruppen*.

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[20] Golden Comb.

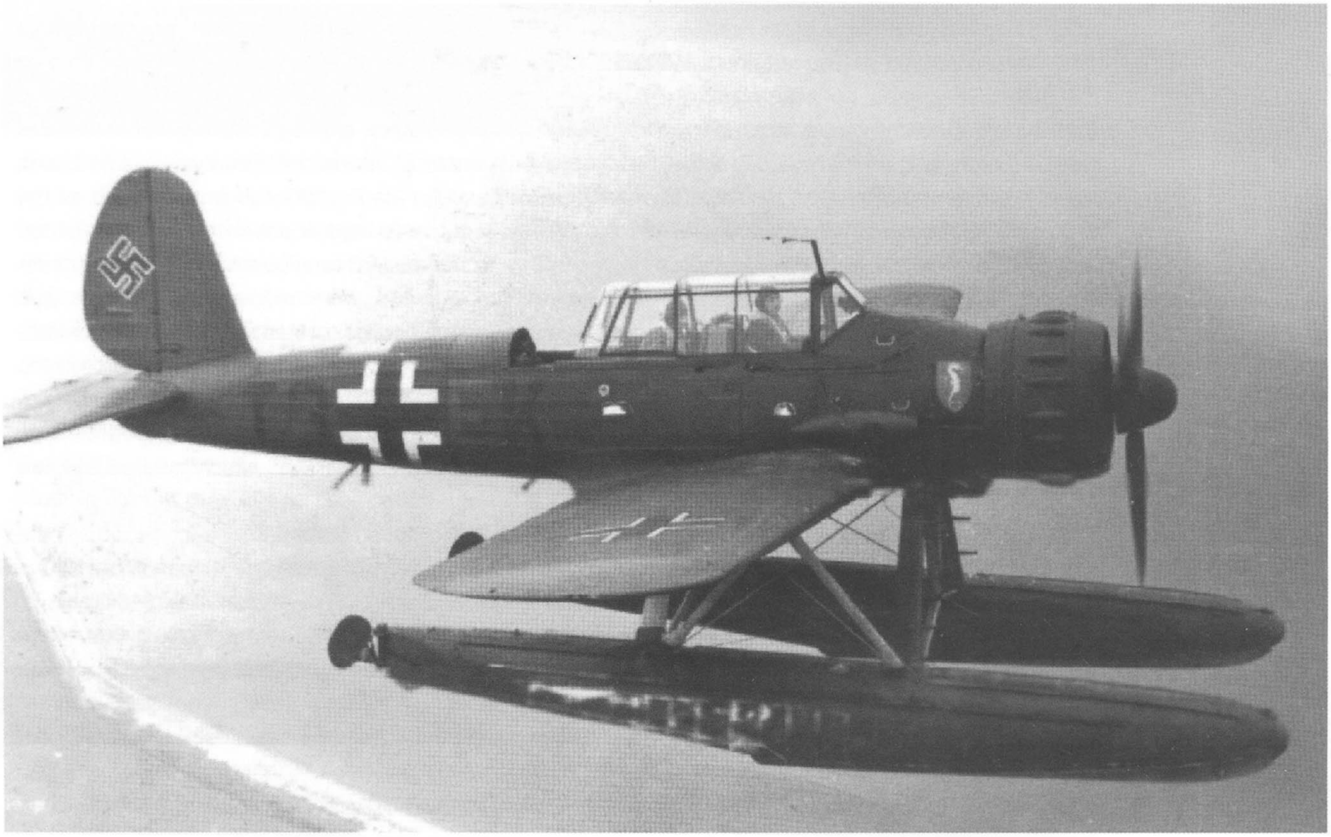
Bordfliegerstaffel 5./196

Formed in July 1937 from 1./406, the *Bordfliegerstaffel* 5./196 was initially equipped with He 60 seaplanes. In mid-1939, it began receiving the more modern Arado Ar 196 floatplane as a replacement. At the time, the *Staffel* unit was based at Kiel-Holtenau, but on 11 April 1940 transferred to the newly occupied base at Aalborg-See in Denmark. Accompanying this move, on 14 April 1940, the *Staffel* was placed under the tactical command of *Stab./Küstenfliegergruppe* 906, which itself was under the theatre command of *Führer der Luftstreitkräfte Ost* (Commander of the Air War - East). For two months the unit was based at Aalborg-See, but in June 1940, after a three-day deployment at Grossenbrode, east of Kiel, the unit was again transferred, this time to Trondheim-Hommelvik, arriving there on 23 June 1940. On 3 September 1940, the unit made a transitory stop at Kiel-Holtenau before moving to Cherbourg later that month.

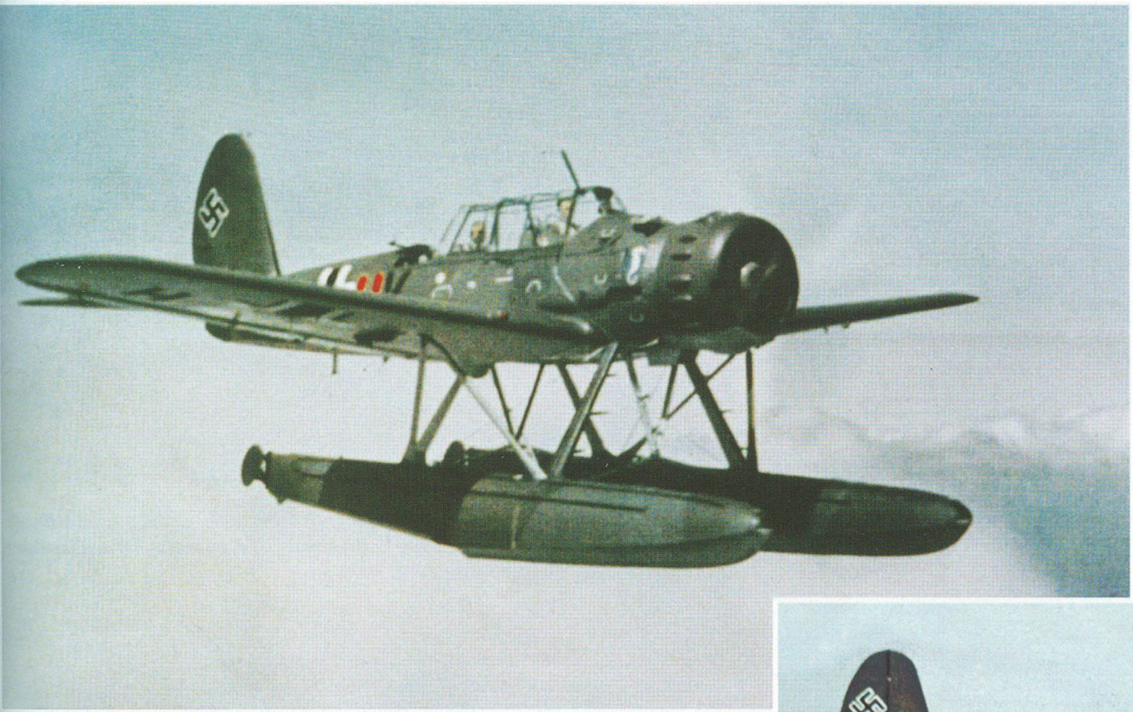
In April 1941 the *Staffel* again transferred, this time to Brest-Süd, where it would remain for two years under the command of the *Fliegerführer Atlantik*. During this period, typical missions for the unit included anti-submarine patrols and air-sea rescue duties. At the time of the unit's move to Brest-Süd, the *Staffel* had on strength 20 Ar 196s, of which 17 were airworthy and 19 aircrew, of which 13 were ready for operations.

As the Atlantic war intensified, it became obvious that the *Luftwaffe* was not providing adequate protection for U-Boats crossing the Bay of Biscay. In early April 1943 the then *Fliegerführer Atlantik*, *Generalleutnant* Ulrich Kessler, requested that auxiliary tank-equipped Focke-Wulf Fw 190s fly patrols to the area south-west of Cornwall, where Coastal Command aircraft could be expected to fly. As the 5./196 was already operating in the region and was accustomed to the operational requirements of the theatre, the unit began receiving the first of the requested Fw 190s during March 1943, but the intention was not to fully re-equip the unit with single-engined fighters. The Fw 190s were to be used as long-range fighters – in accordance with Kessler's wishes – while the Ar 196s would remain on strength, continuing their old duties. In early March 1943, a pair of Fw 190 A-5s came direct from the factory, while some earlier variants arrived at the unit from repair facilities. Conversion was completed during April and the obsolete early Fw 190 models were passed to other units. The Fw 190 A-5s operated by the 5./196 were equipped with a pair of 300-litre drop tanks under each wing, giving them increased range – enough to cover the area south-west of Cornwall and the Scilly Islands.

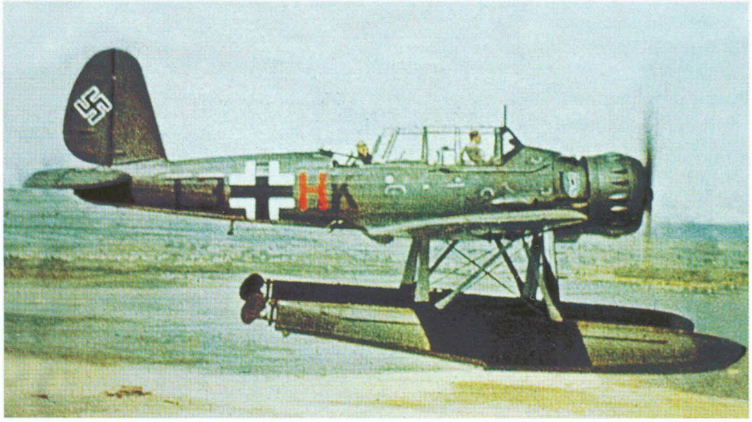
In June 1943 the 5./196 was redesignated as the 1./SAGr.128 and was not re-formed.

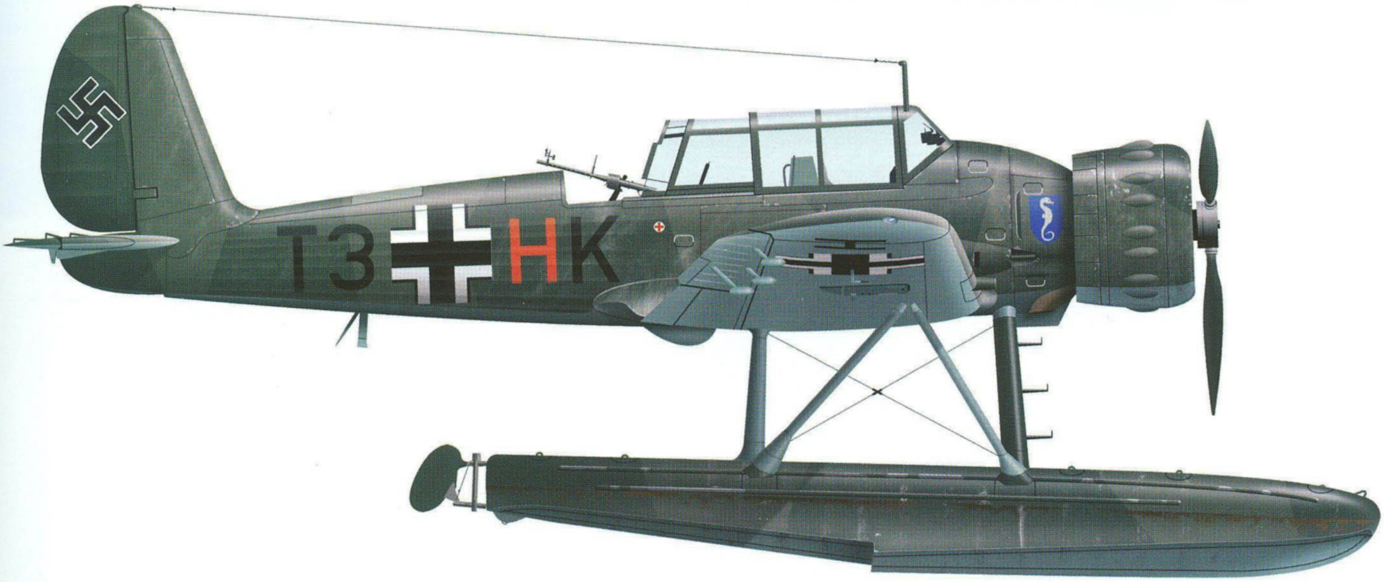


Arado Ar 196 A-3, T3+EK of the 2./BFlGr.196 in flight above the North German coastline circa 1942. Finished in the standard maritime camouflage of green 72 & 73 with 65 blue under surfaces, it carries the silver and black Staffel sea horse emblem on a dark-bordered light blue shield on the forward fuselage and the aircraft letter 'E' is in the Staffel colour of red.



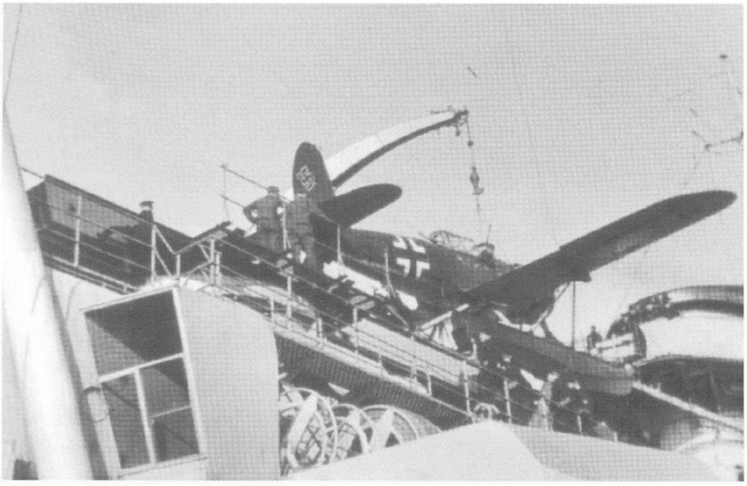
An undated in-flight colour view of a spinner-less Arado Ar 196 A-2, red 'H', of the 2./BFlGr.196 whose blue and white sea horse emblem is clearly visible on the fuselage side immediately aft of the cowling. This Ar 196 is unusual in that it had not been fitted with a spinner.



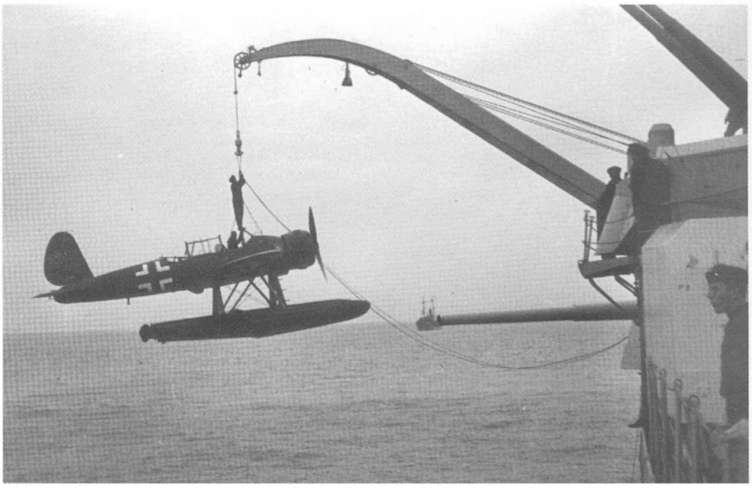


Arado 196 A-2, T3+HK of the 2./BFlGr.196

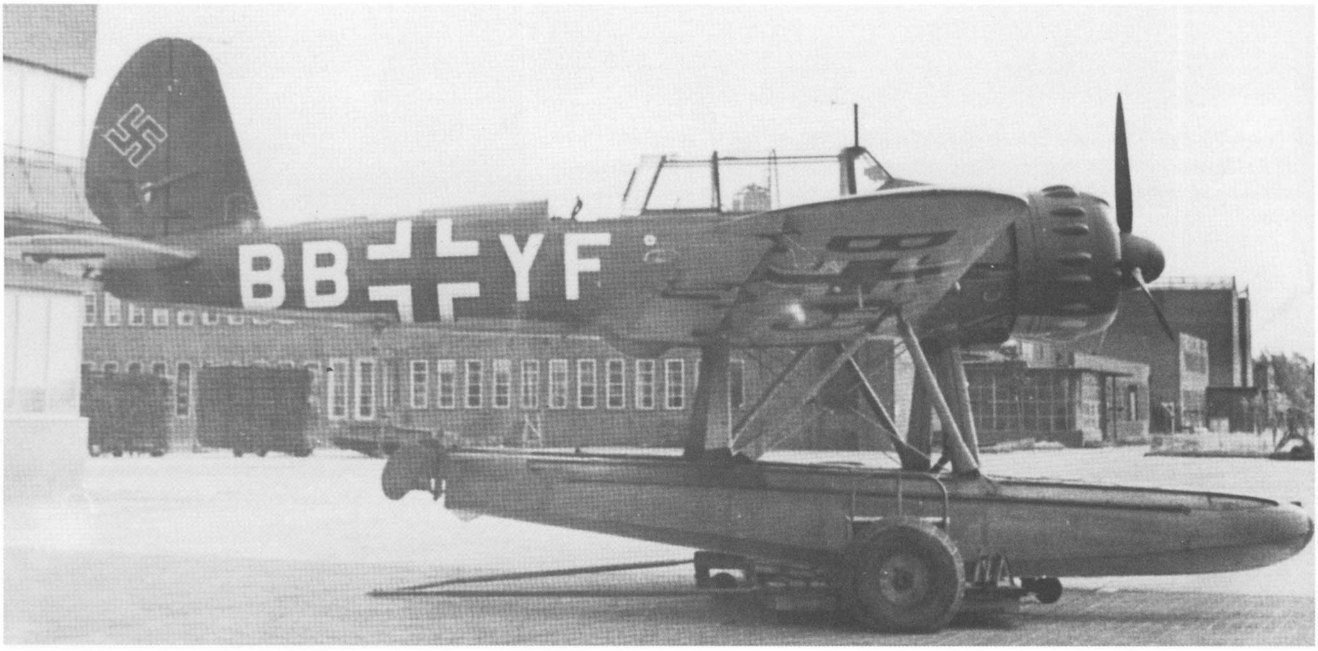
Wearing standard maritime camouflage with the national markings carried in the six standard positions and the swastika in the early war position on the rudder, T3+HK has its individual aircraft letter of 'H' painted in the Staffel colour of red which was repeated beneath each wing tip in black. It also carries the Staffel sea horse emblem on a blue shield on both sides of the forward fuselage immediately aft of the engine cowling.



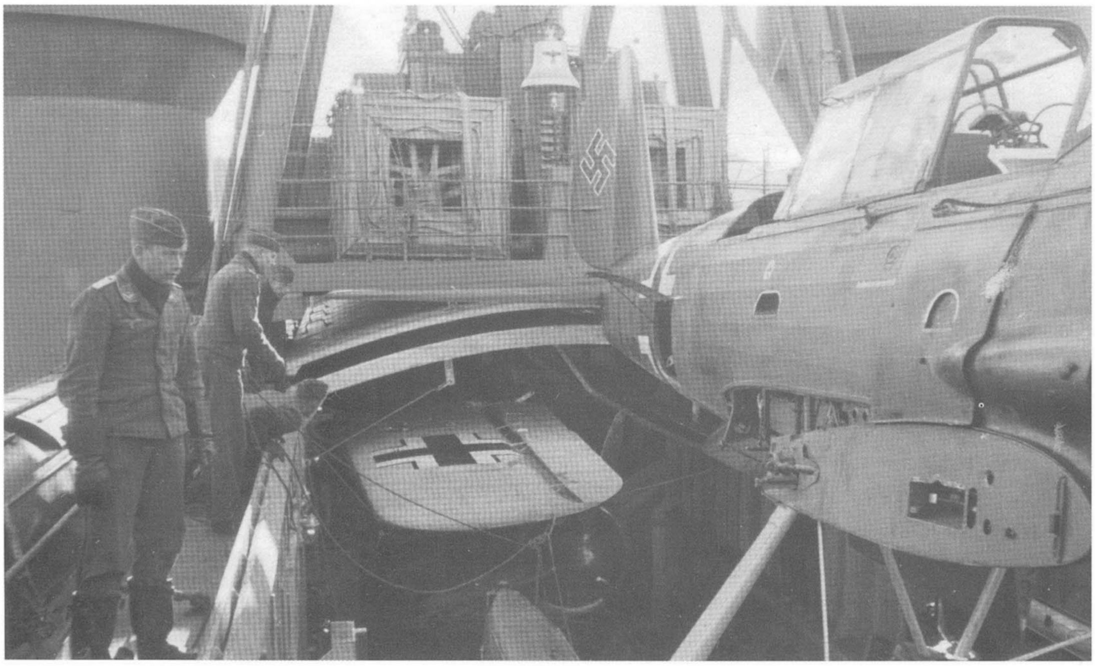
An undated view of Arado Ar 196 A-3, T3+NH of the 1./BFlGr.196 sitting on the catapult abaft the funnel of the heavy cruiser 'Scharnhorst'.



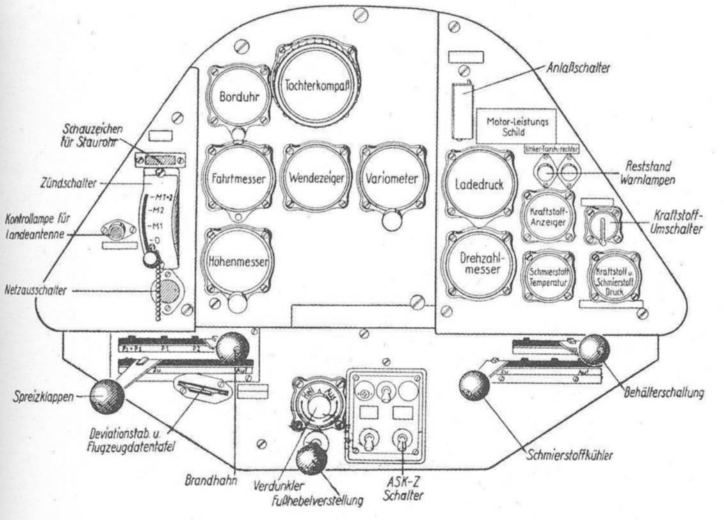
An undated view of an Arado Ar 196 A-2 of the 1./BFlGr.196 being hoisted aboard the heavy cruiser 'Scharnhorst' by one of the ship's 12-ton cranes; visible beneath the rear fuselage is the bulged fairing housing for the Peil G V antenna.



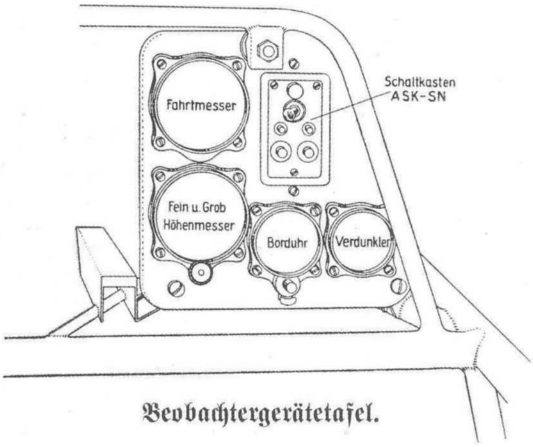
An undated photograph of Arado Ar 196, W.Nr.100132, BB+YF sitting on its beaching trolley at Warnemünde. This aircraft is recorded as having a lengthy career, serving first with the E-Stelle (See) at Travemünde, then a period on board 'Tirpitz' with BFlGr.196, before going to the 4./Fl.Erg.Gr.(See) at Kamp where it wore the Verbandkennzeichen 6H+FM; its last recorded service was with the 1./FAGr.5.



One of the three embarked Arado Ar 196A-3s, T3+HL of the 3./BFlGr.196 is seen here during removal from an amidships storage container onboard the heavy cruiser 'Prinz Eugen' in preparation for a sortie. As may be seen here, in addition to being folded, the wings of the Arado could also be removed for on-board storage.

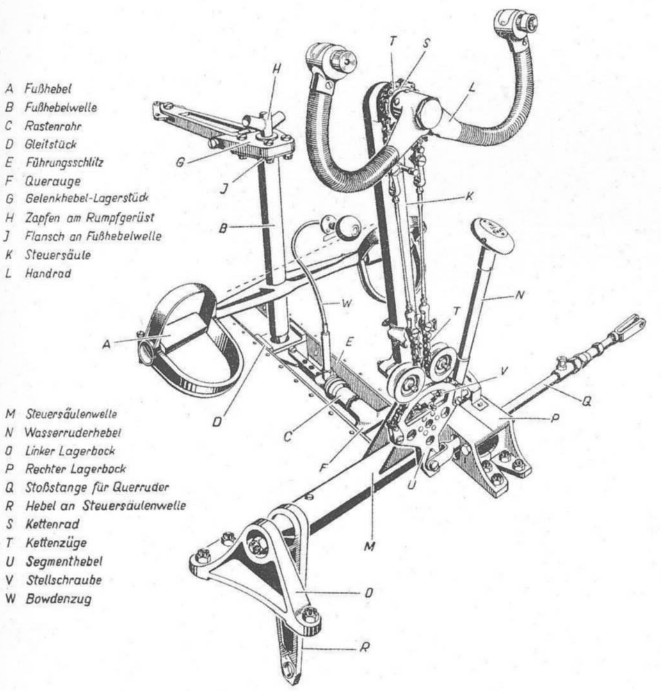

Anlaßschalter
Borduhr
Tochterkompaß
Motor-Leistungs Schild
Schauzeichen für Staurohr
Zündschalter
Kontrollampe für landeantenne
Netzausschalter
Fahrtmesser
Wendezeiger
Variometer
Höhenmesser
Ladedruck
Linker Tank rechter
Reststand Warnlampen
Kraftstoff-Anzeiger
Kraftstoff-Umschalter
Drehzahlmesser
Schmierstoff Temperatur
Kraftstoff u. Schmierstoff Druck
M1+2
M2
M1
0
Spreizklappen
Deviationstab. u. Flugzeugdatentafel
Brandhahn
Verdunkler
Fußhebelverstellung
ASK-Z Schalter
Schmierstoffkühler
Behälterschaltung

Haupt= und Hilfsgerätetafel Ar 196 A.


Schaltkasten ASK-SN
Fahrtmesser
Fein u. Grob Höhenmesser
Borduhr
Verdunkler

Beobachtergerätetafel.

A series of illustrations taken from an Arado handbook on the Arado Ar 196 showing: above left, the pilot's instrument panel; top right, the rear observer's instruments; below left, the pilot's control column and rudder pedals (the smaller control column marked with an 'N' is the rudder control for the floats); bottom, shows a rudder raised for flight (dotted line) and lowered for taxiing on water; and below right the pilot's seat and rear observer's sliding seat.


A Fußhebel
B Fußhebelwelle
C Rastenrohr
D Gleitstück
E Führungsschlitz
F Querauge
G Gelenkhebel-Lagerstück
H Zapfen am Rumpfgerüst
J Flansch an Fußhebelwelle
K Steuersäule
L Handrad
M Steuersäulenwelle
N Wasserruderhebel
O Linker Lagerbock
P Rechter Lagerbock
Q Stoßstange für Querruder
R Hebel an Steuersäulenwelle
S Kettenrad
T Kettenzüge
U Segmenthebel
V Stellschraube
W Bowdenzug
H
T
S
L
G
J
B
K
W
E
N
A
T
V
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D
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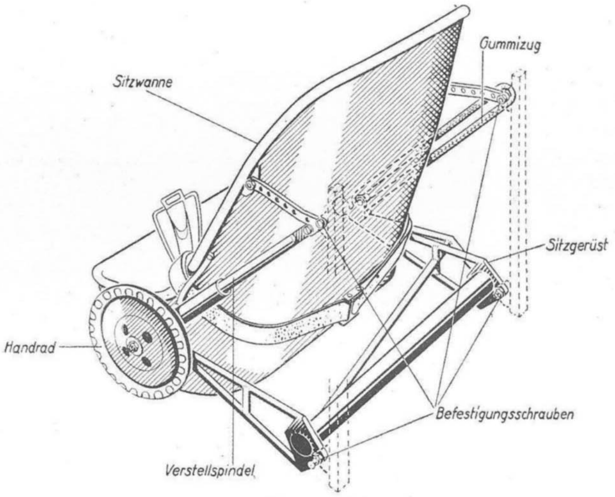
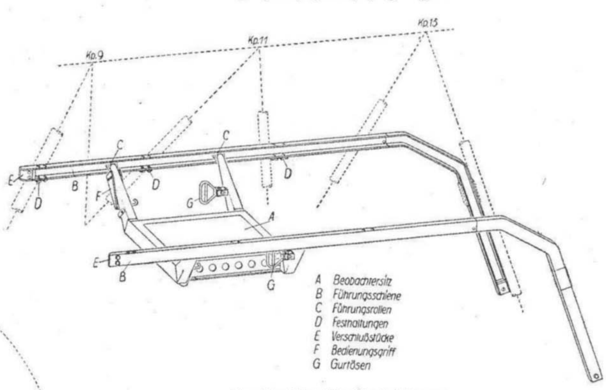
R

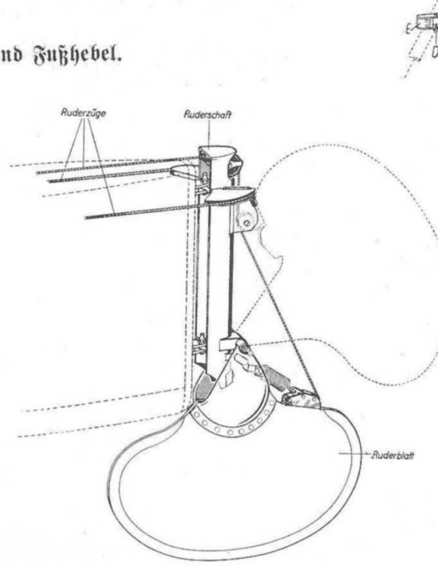
Steuerſäule und Fußhebel.


Gummizug
Sitzwanne
Sitzgerüst
Handrad
Befestigungsschrauben
Verstellspindel

Führerſitz=Befeſtigung.

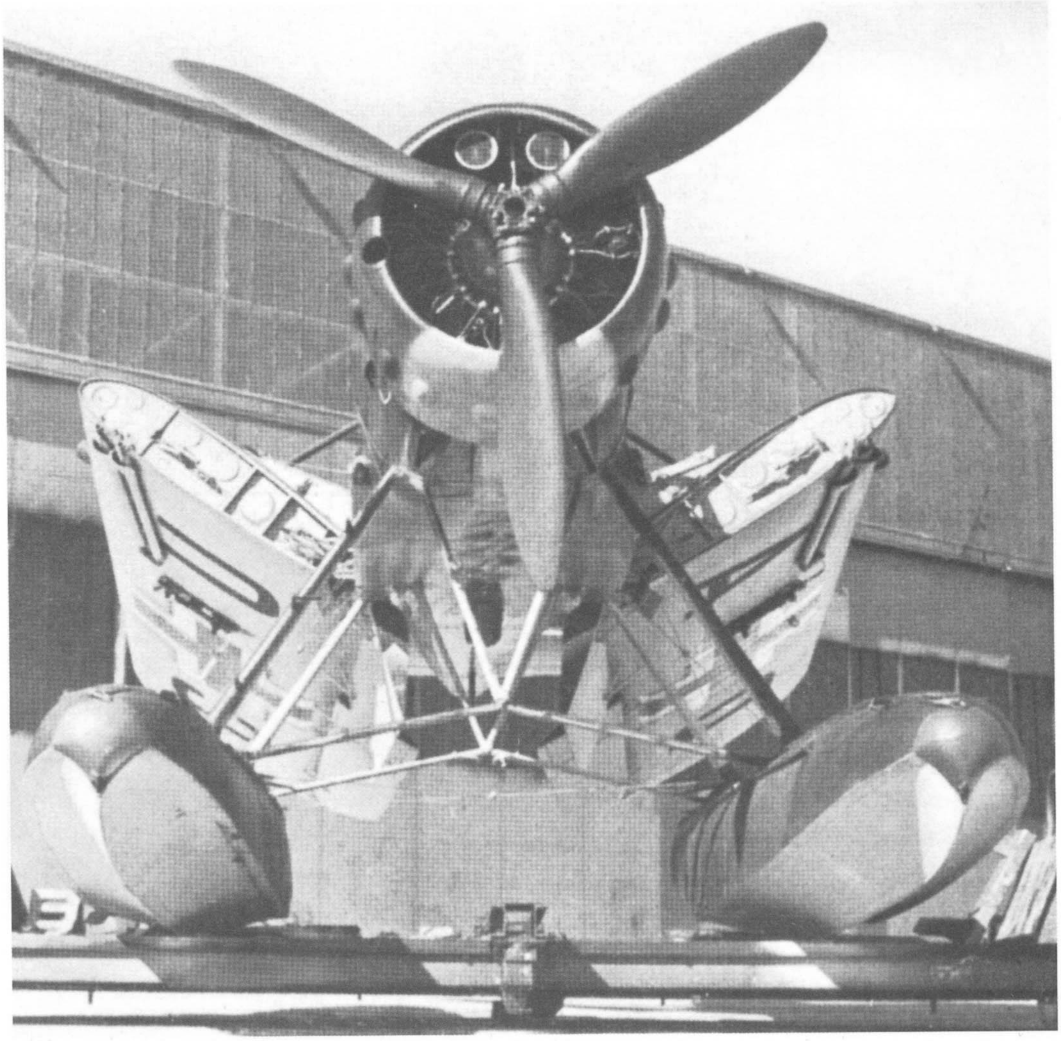

Kp.9
Kp.11
Kp.13
C
C
E
B
D
F
D
D
G
A
E
B
G
A Beobachtersitz
B Führungsschiene
C Führungsrollen
D Festhaltungen
E Verschlußstücke
F Bedienungsgriff
G Gurtösen

Beobachterſitz=Befeſtigung.

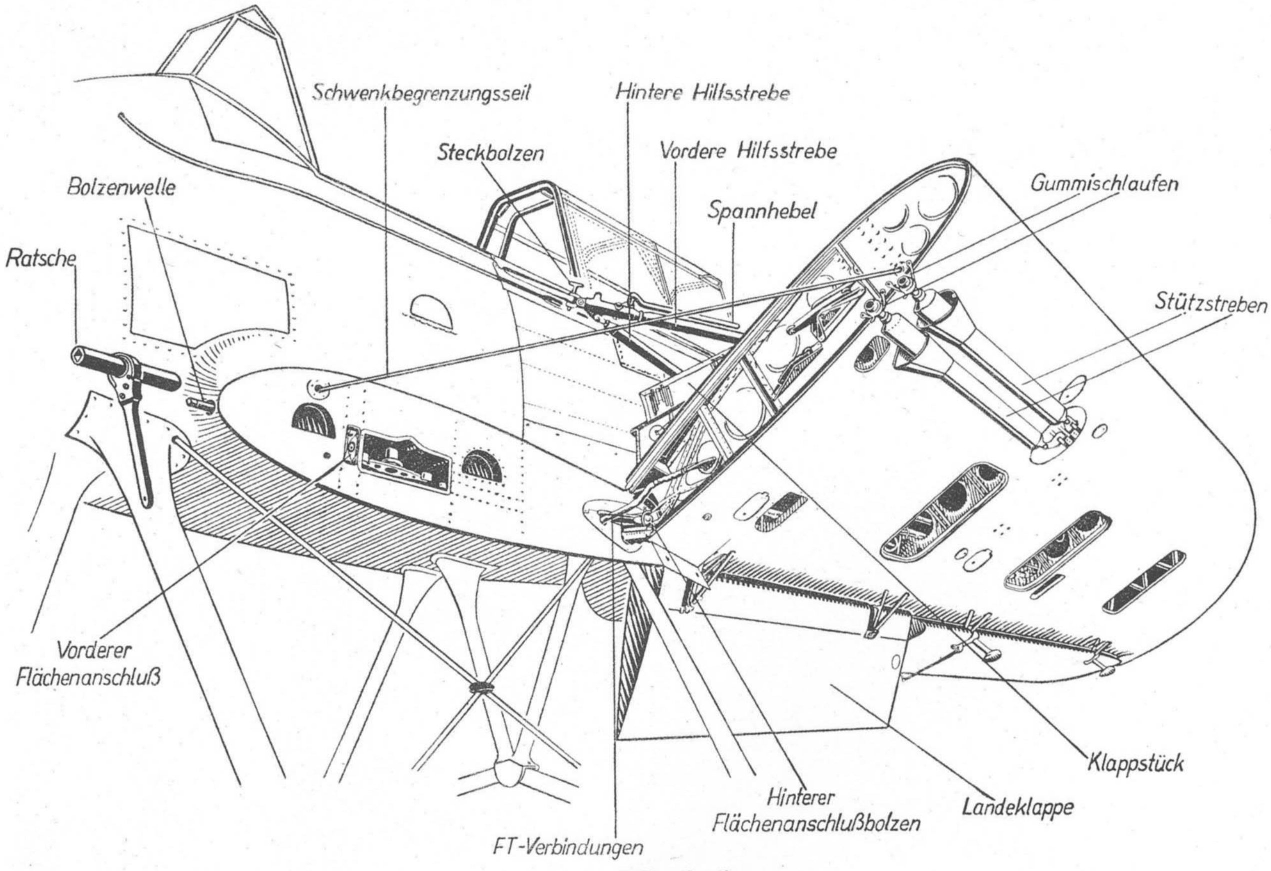

Ruderzüge
Ruderschaft
Ruderblatt

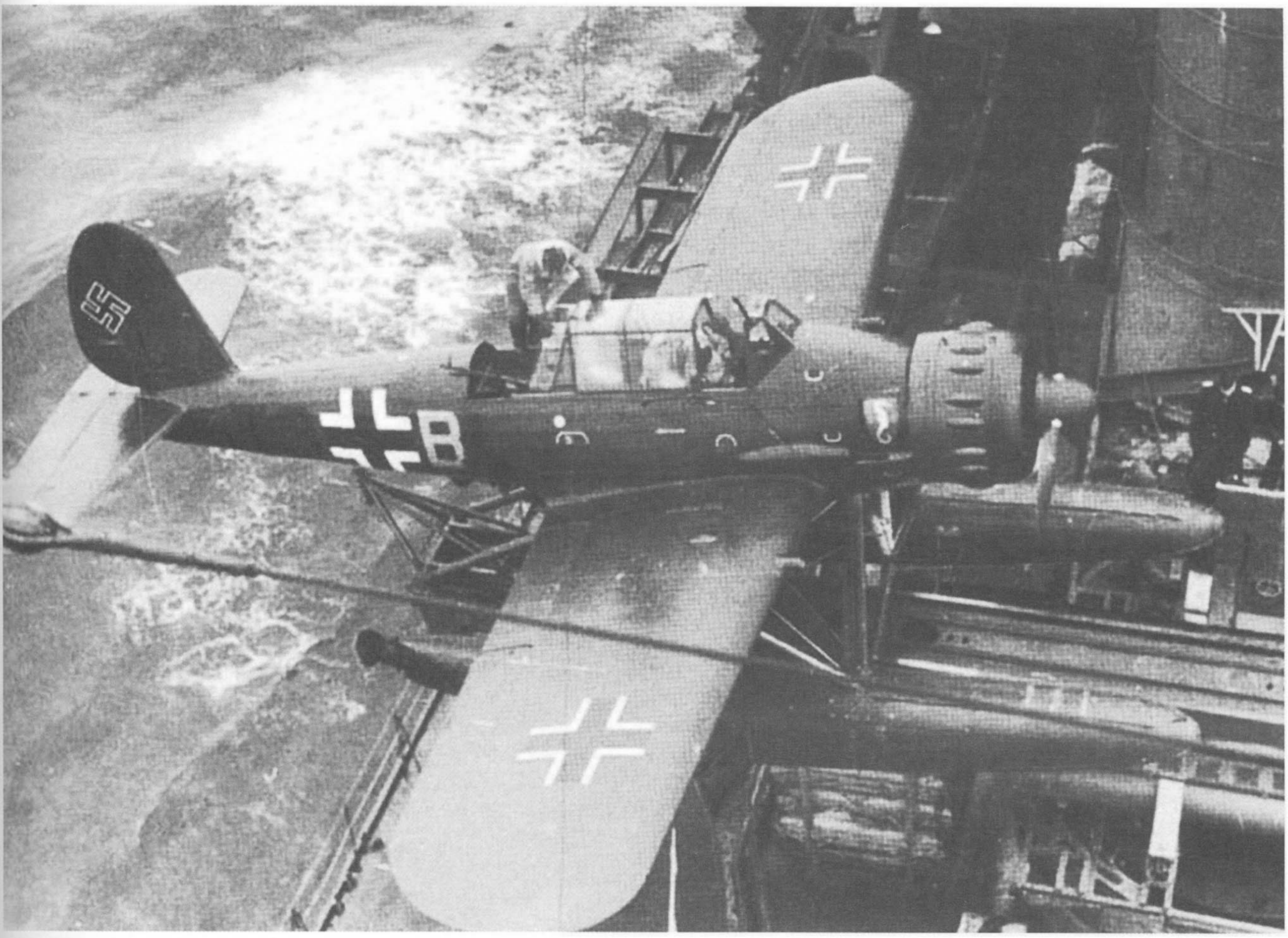
Waſſerruder.

A head-on view of an unidentified Arado Ar 196 A-1, which illustrates how the main wings were folded along the fuselage sides to facilitate storage on board ship.

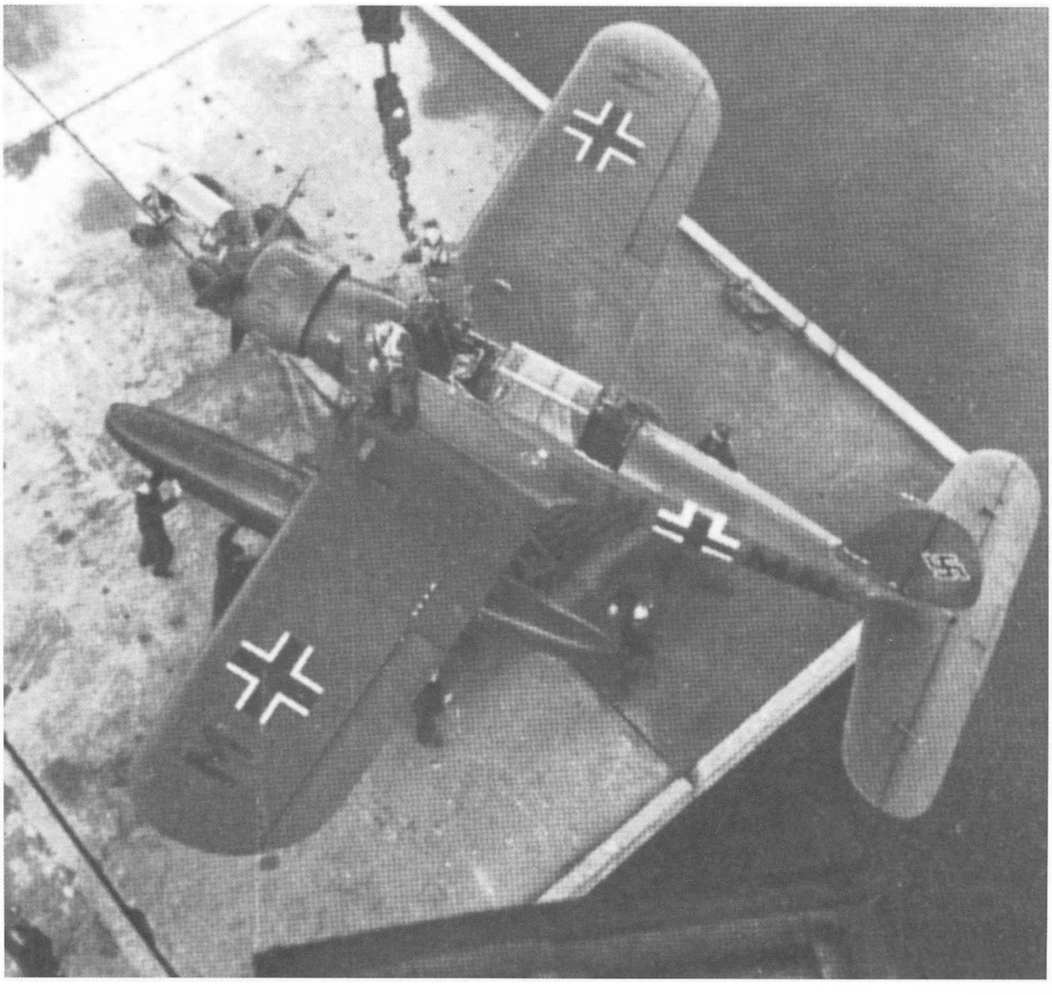


Arado handbook drawing, illustrating the wing stowage.

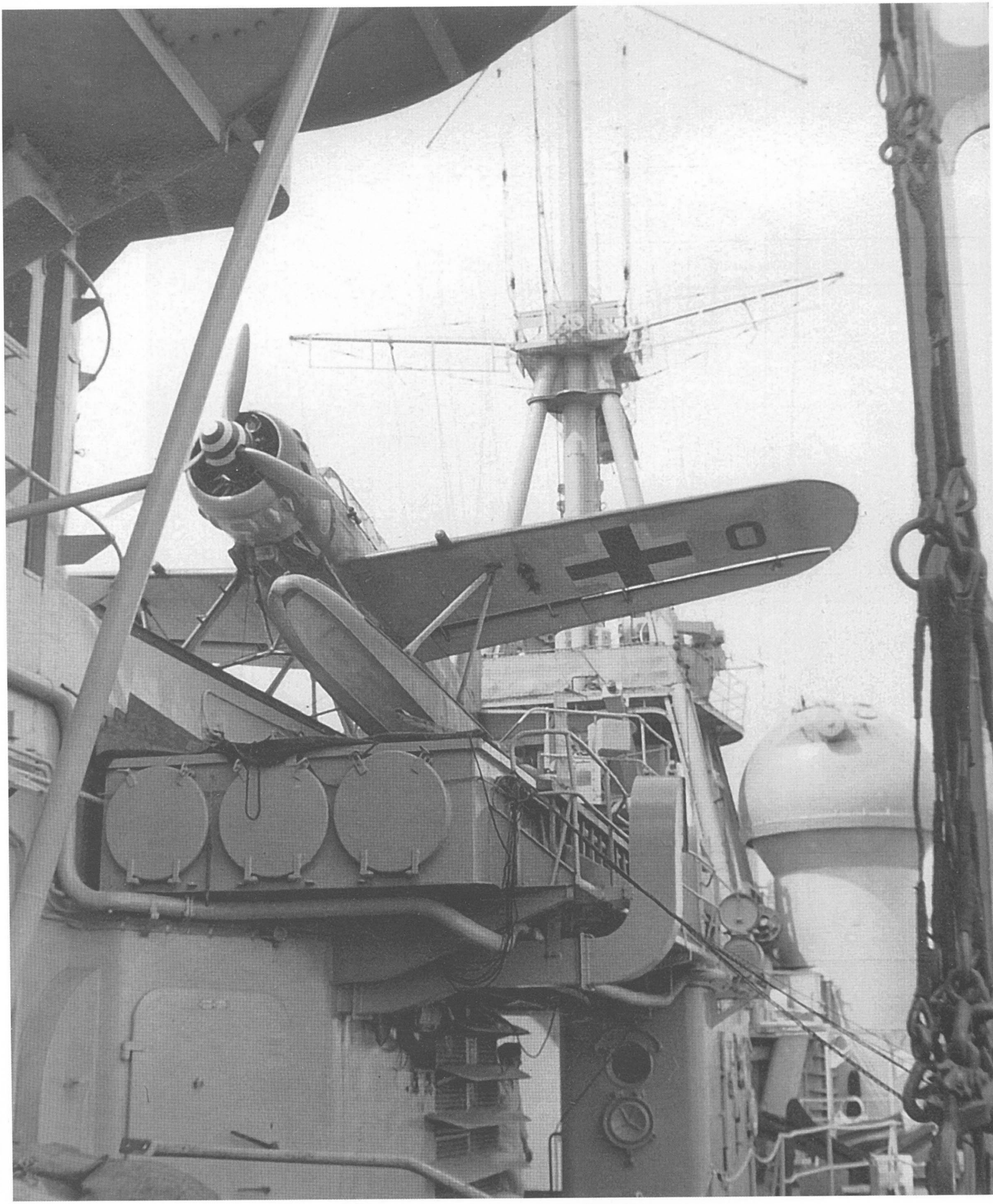

Schwenkbegrenzungsseil
Hintere Hilfsstrebe
Steckbolzen
Vordere Hilfsstrebe
Bolzenwelle
Spannhebel
Gummischlaufen
Ratsche
Stützstreben
Vorderer Flächenanschluß
Klappstück
Hinterer Flächenanschlußbolzen
Landeklappe
FT-Verbindungen
Flügelanbau.



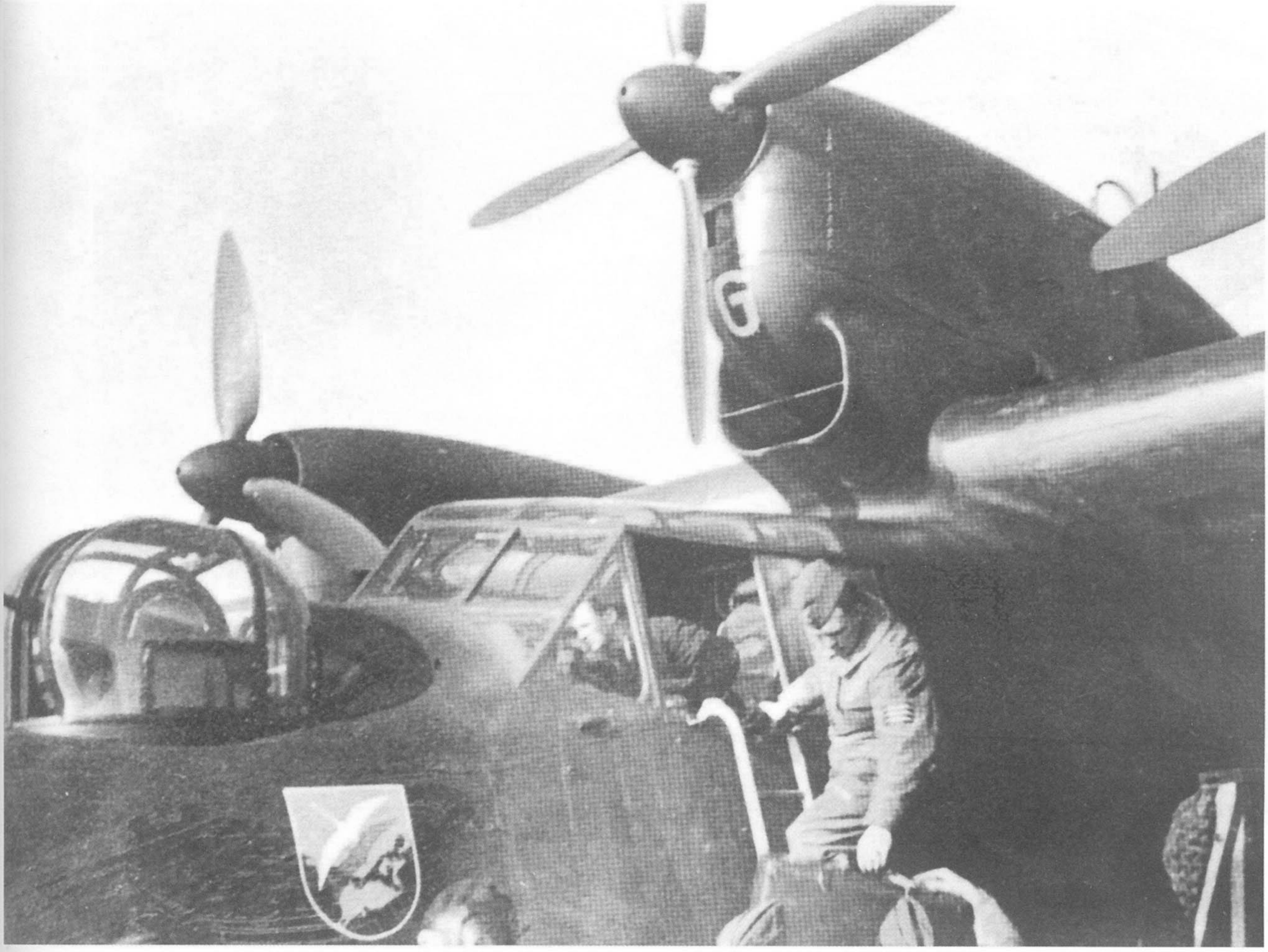
The crew of Arado Ar 196A-3 T3+BL of the 3./BFlGr.196 is seen here boarding their aircraft prior to launching from the amidships-mounted catapult of the battleship 'Tirpitz'.



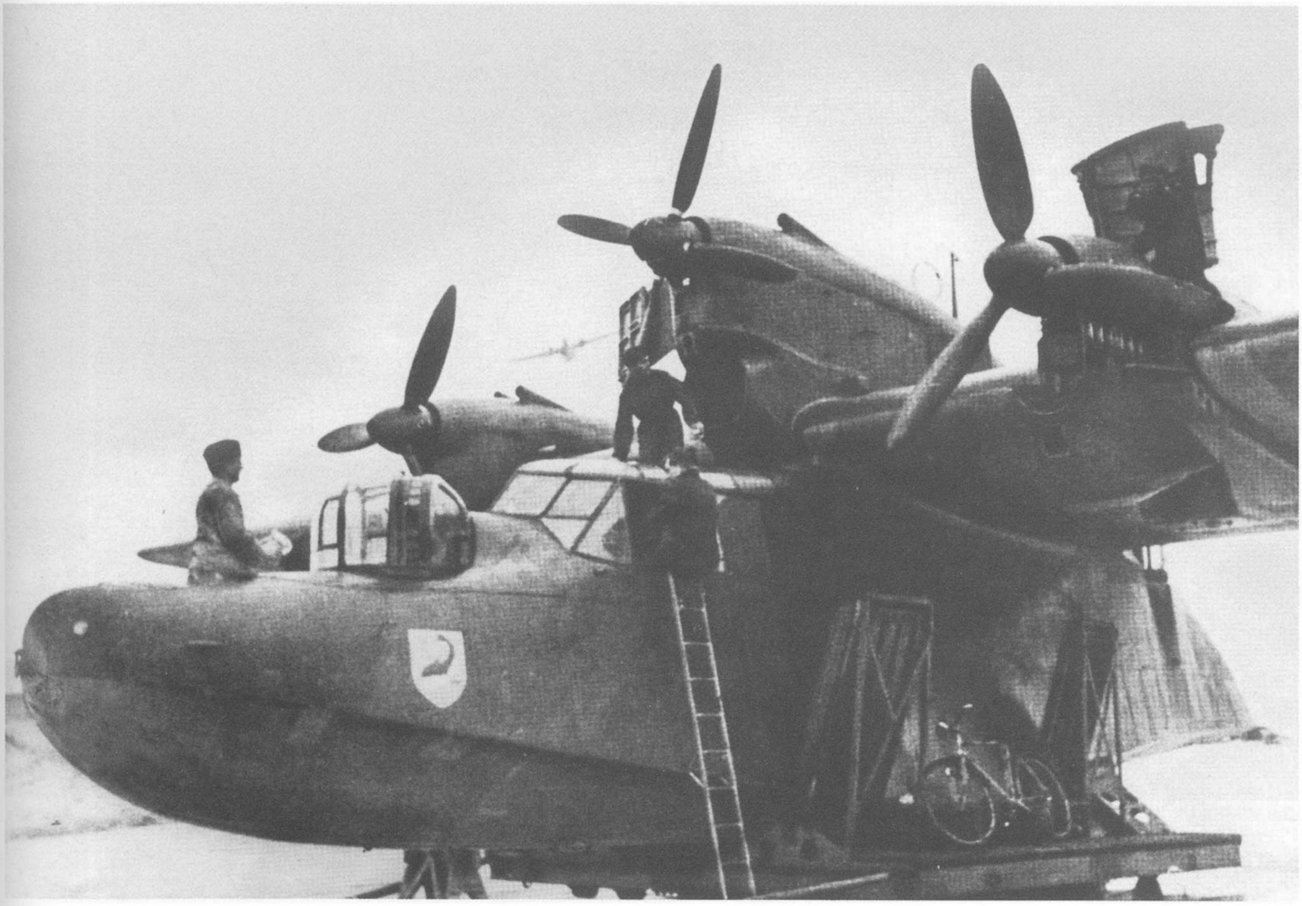
A high angle view of Arado Ar 196 A-3, 6W+MM of the 5./BFlGr.196 as ground personnel prepare the aircraft for hoisting. The individual black-painted aircraft letter 'M' is repeated in the customary early war upper wing position outboard of the national markings. In June 1943, the then Brest-Hourtin-based Staffel was redesignated as the 1./SAGr.128, retaining its former 6W Verbandkennzeichen.



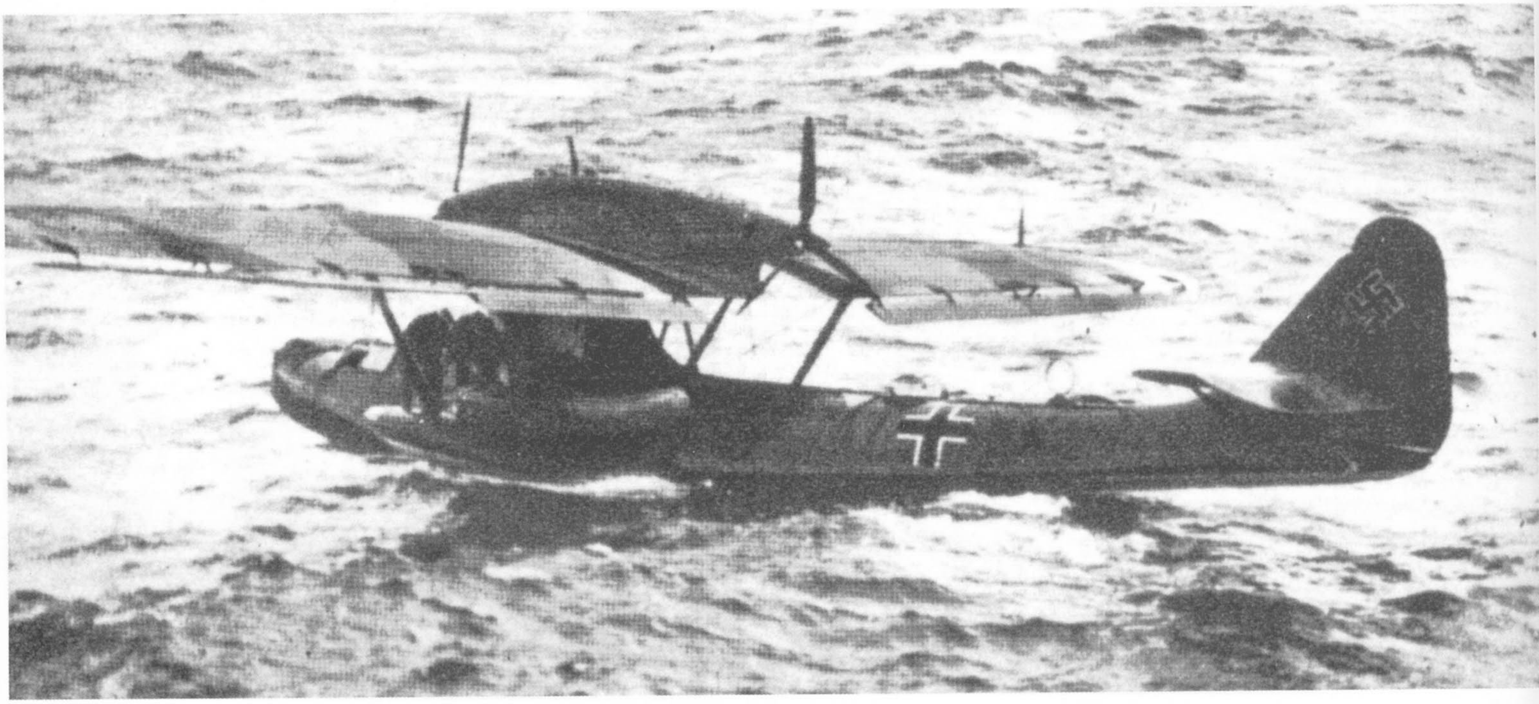
Arado Ar 196 A-3 coded T3+OM of the 4./BFlGr.196 is seen here sitting on the amidships catapult of the heavy cruiser 'Prinz Eugen' at the time of her surrender to the Allies at Copenhagen in May 1945. The 'Prinz Eugen' carried three of these aircraft: two of them are in store in the USA, one at the National Space and Air Museum and the other at the National Museum of Naval Aviation.



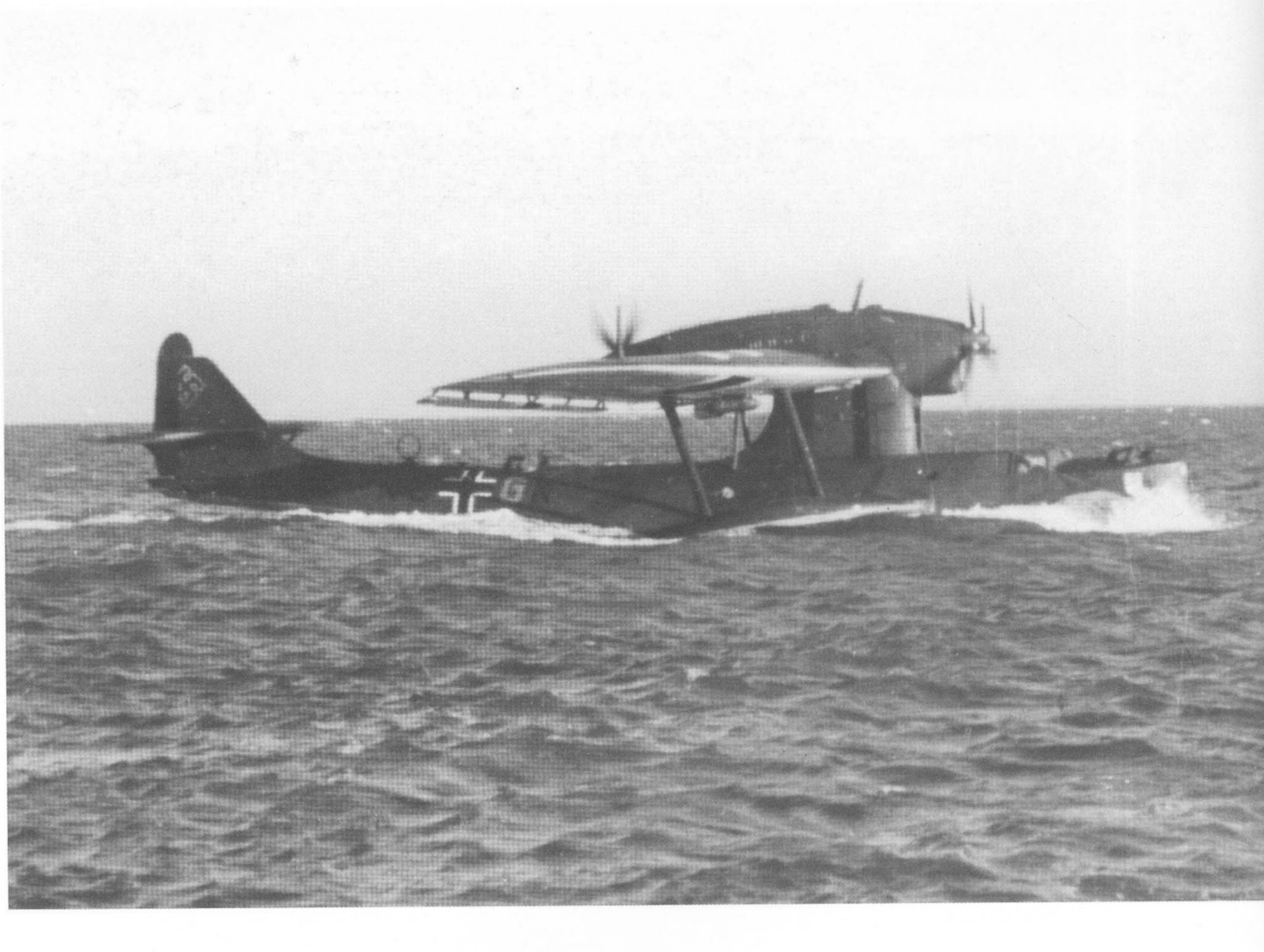
Staffel personnel prepare to board Blohm und Voss Bv 138, K6+GH, white 'G' of the 1./KFlGr.406 in preparation for their next sortie. The paired swan Staffel emblem was carried on each side of the bow with the swans facing forward and up.



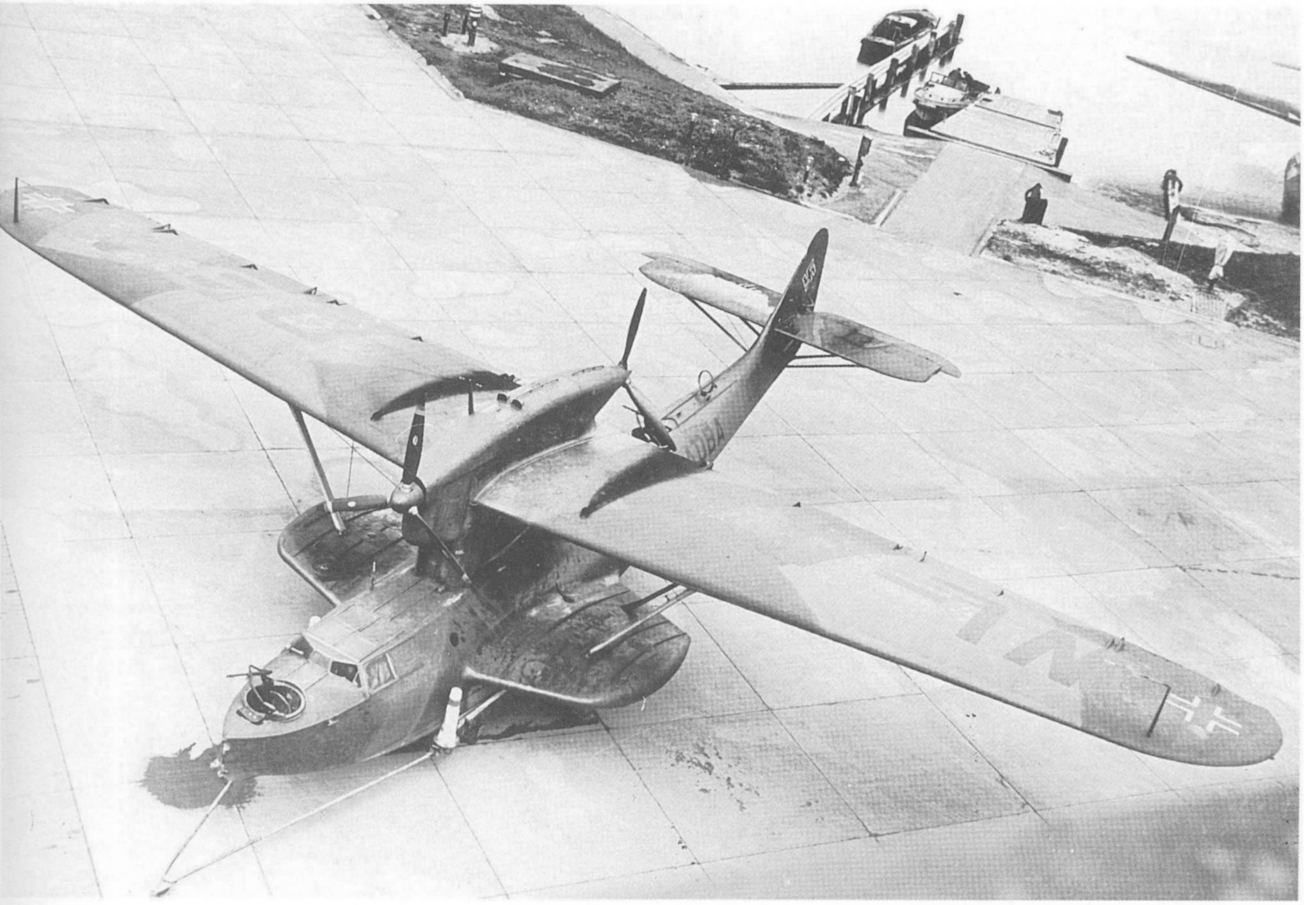
A Bv 138 C of the 2./KFlGr.406 undergoing servicing at Tromsö/Sörreisa circa 1941. Clearly visible on the bow of the aircraft is the Staffel emblem of a dark-bordered blue shield containing a large black and white whale superimposed over the island of Sylt and its prominent lighthouse.



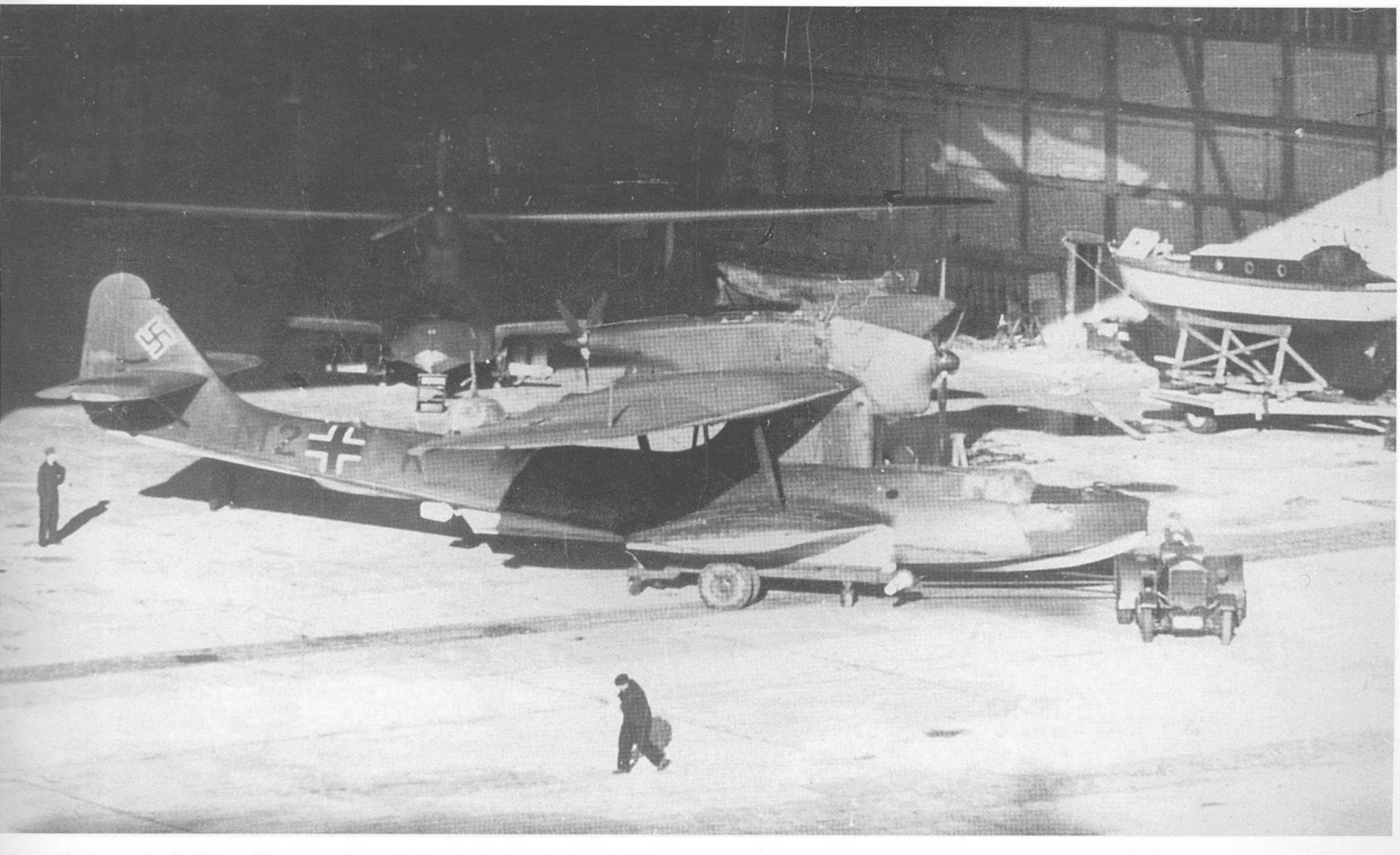
The crew of Dornier Do 18 D, W.Nr.0731, coded KY+YK, are seen abandoning their aircraft as it drifts in the North Sea after being forced down by a Blackburn Skua from 803 NAS on-board HMS Ark Royal on 26 September 1939. This was the first Luftwaffe aircraft to be lost in operations against the United Kingdom during the Second World War and although the relevant records state that it was from the 2./KFlGr.506 there is some evidence to suggest that it was actually on the strength of the 2./KFlGr.106 at the time of its loss.



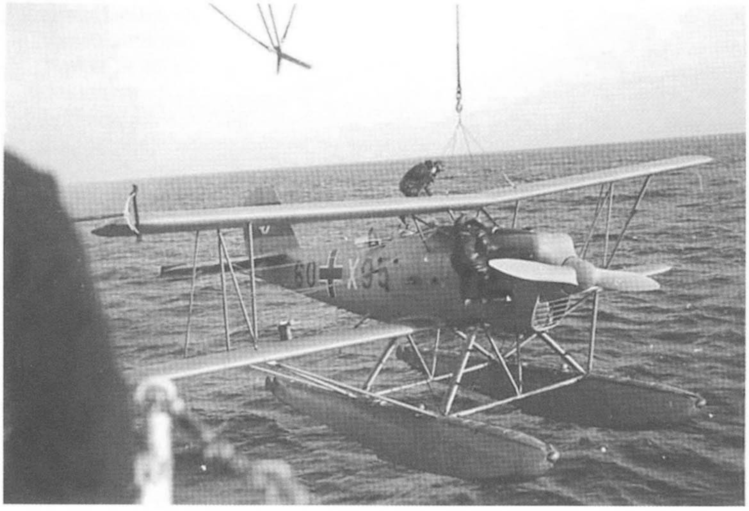
Taken on 22 October 1939, this German PK (Propaganda Kompanie) photograph shows Dornier Do 18D K6+GK, Red 'G', of the 2./KFlGr.306 taxiing past the camera during a propaganda photo shoot off the North Sea island of Sylt. Just visible beneath the starboard wing and adjacent to the struts can be seen the two ETC 50 bomb carriers loaded with a pair of SC 50 bombs. On the day that this photograph was taken, the Staffel was redesignated as the 3./KFlGr.406 and it is believed that this picture may be one of a series taken that day.

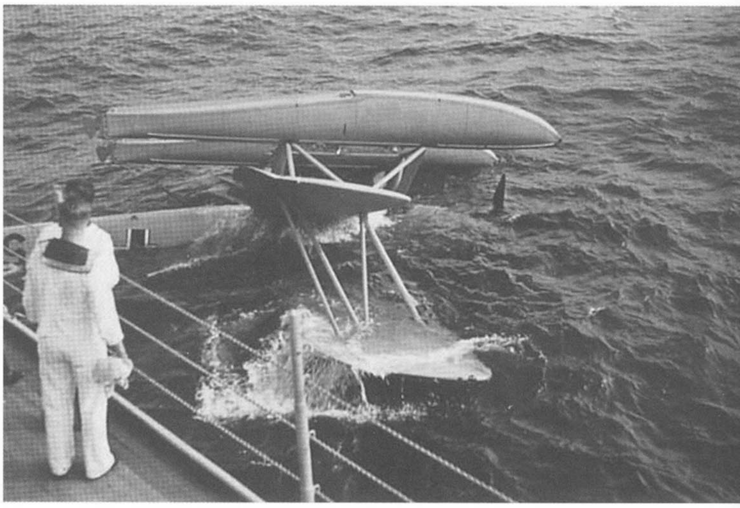


An undated topside view of the Dornier Do 18G V1, W.Nr.841, on the slipway at the E-Stelle Travemünde. Finished in an upper splinter scheme of 72/73 it carries full national markings as well as the short-lived Wehrmacht Luft code of WL – ADBA across the top of the wing and both fuselage sides. Clearly visible are the heavy 'V' shaped exhaust stains produced by the wing-mounted exhausts of the forward Jumo diesel engine. Although not displayed, the aircraft was issued the Stammkennzeichen of TJ+HP.

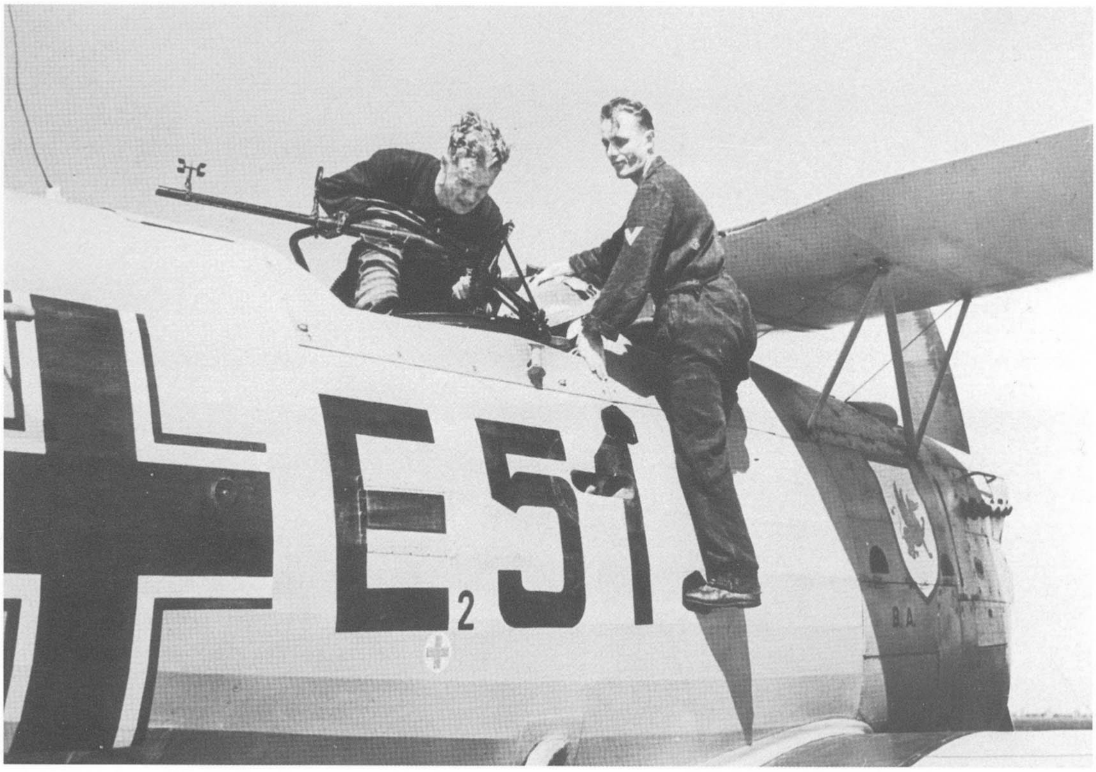


Finished in the standard 72/73 maritime camouflage, this Dornier Do 18 G-1 of the 2./KFlGr.106 carries the unit code and Staffel letter but has yet to have the individual aircraft letter applied. Although similar in general appearance to the Do 18 D, the G-1 featured a recontoured bow, a pair of more powerful Junkers Jumo 205D engines and improved defensive armament consisting of a 13 mm MG 131 in the bow position and a 20 mm MG 151 cannon mounted in a hydraulically operated turret in the rear fuselage. It also carried provision for the attachment of take-off assistance rockets.

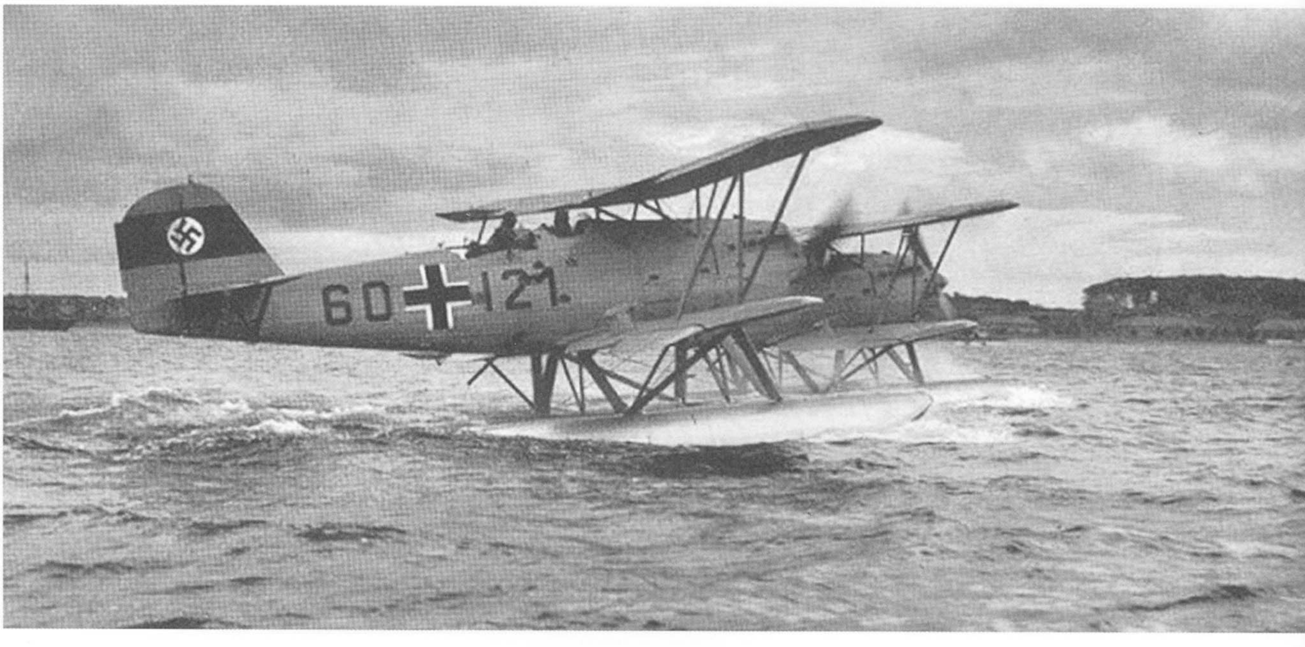




Above and above right: Heinkel He 60, 60+X95 of the 1./KFlGr.506 suspended outboard from a hoist of an unidentified Kriegsmarine ship. Shortly after the first photograph was taken the hoist cable broke, sending the aircraft crashing inverted into the sea alongside the ship, as seen in the second photograph. Eventually made fast to the side of the ship, it is not known if the aircraft was recovered.

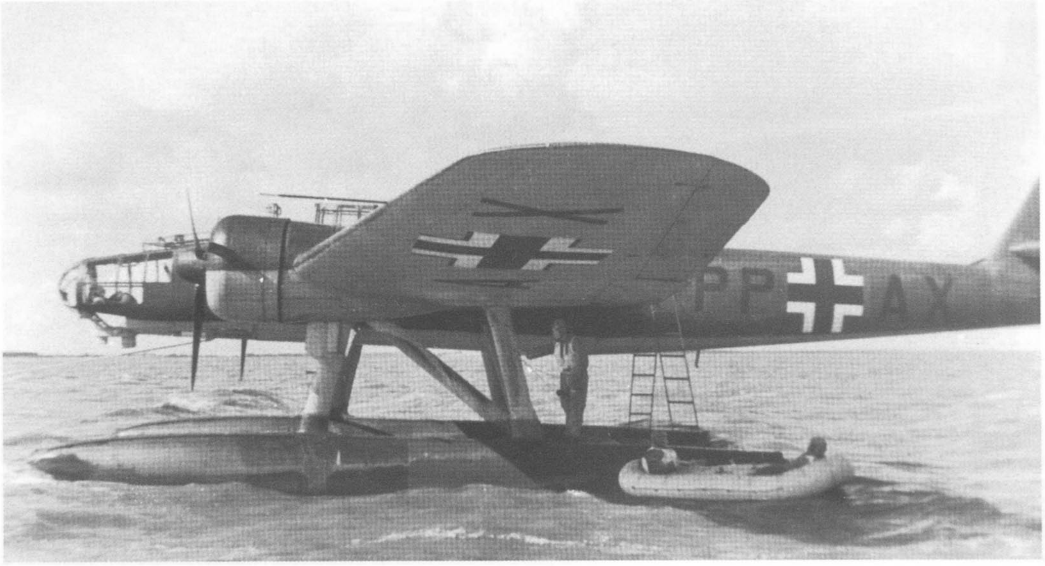


Ground personnel working on the cockpit area of a Heinkel He 60 coded 60+E51 of the 1/KFlGr.506. Clearly visible in the shadowe area of the fuselage is the Staffel emblem of a brown or red griffon on a blue-bordered white shield. The significanc of the figure '2' above the First Aid marking is not known for certain but may signify that it is the second aircraft within the Staffel to carry the 60+E51 coding.

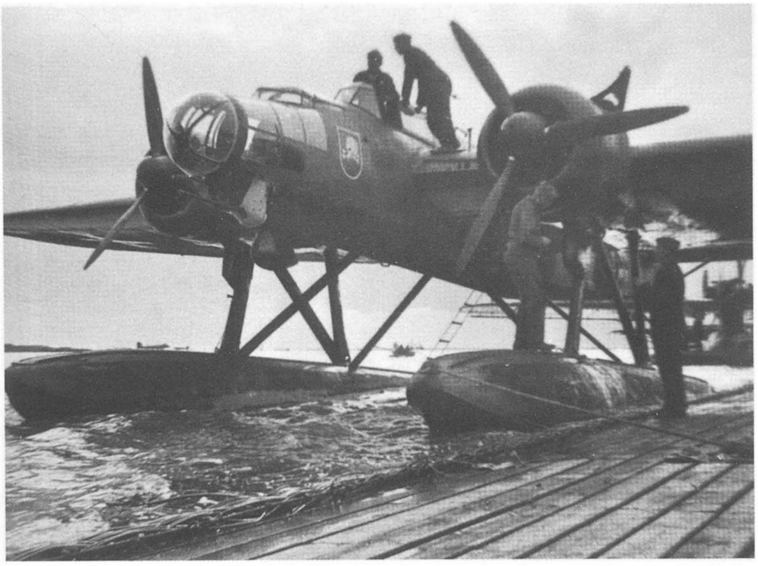


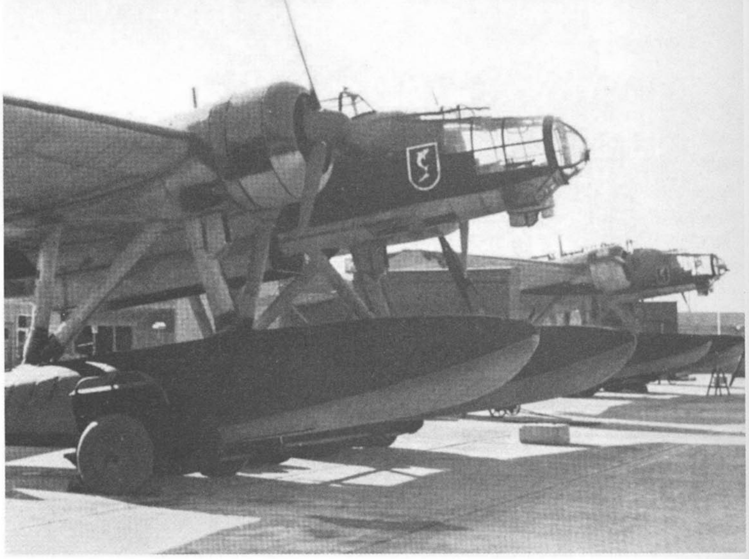
A pair of Heinkel He 60 Cs of the 1./KFlGr.206 taxiing close to their home base on the East Frisian Island of Norderney circa 1936. Formed at Norderney from the 2.(M)/Fliegergruppe (See) 116 in July 1936, the Staffel remained in existence until re-forming in July 1937 as the 1./KFlGr.106.

Developed as a replacement for the Heinkel He 59, another very useful maritime design from Heinkel was the three-seat Heinkel He 115 general-purpose seaplane, which first flew in prototype form in 1936. Following the A-series into service, the B-1 featured increased fuel capacity and was fitted with the release equipment for magnetic mines while in its B-1/R1 form it could carry two cameras for reconnaissance missions. Seen here wearing the standard maritime finish of 72/73/65 is He 115 B-1 wearing the black-painted Stammkennzeichen of PP+AX.

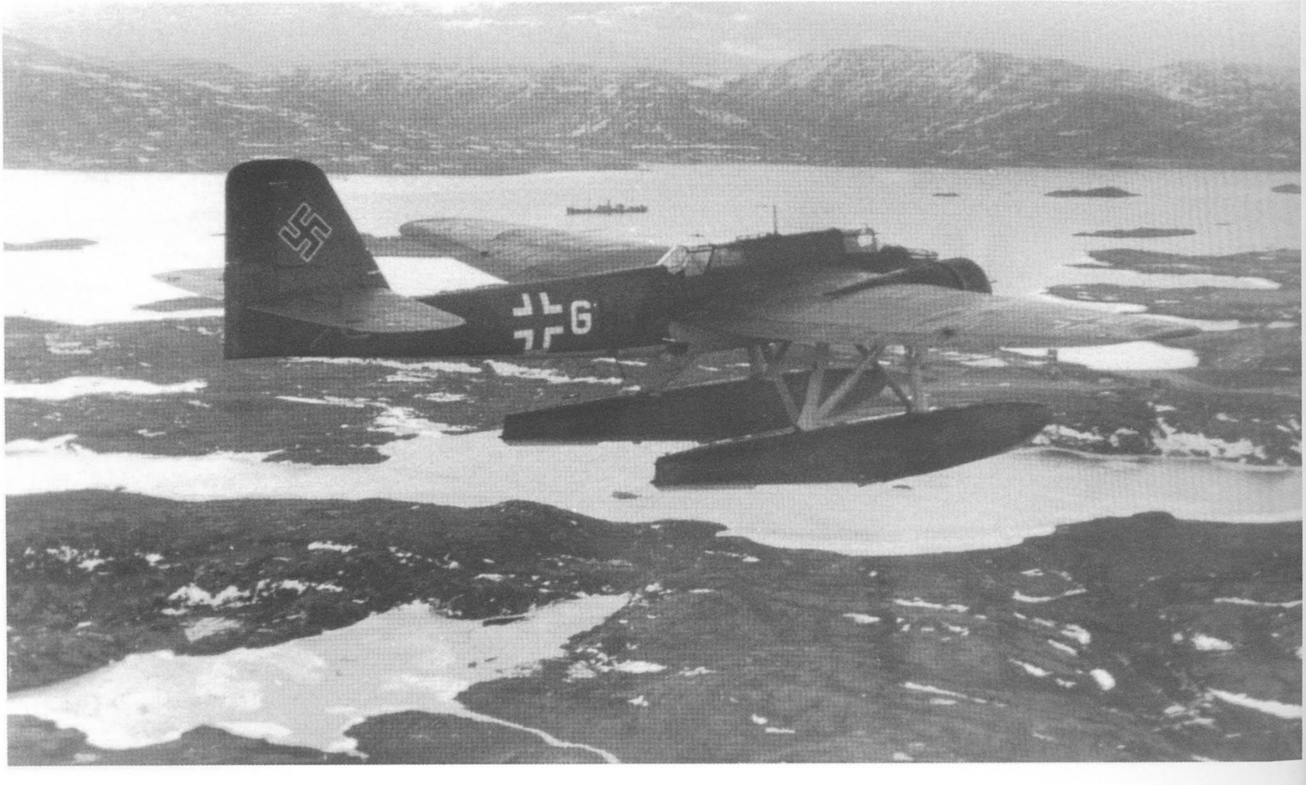


Below: A pair of Heinkel He 115 B-1s of the 1./KFlGr.706 sit on their beaching trolleys at either Aalborg-See or Stavanger circa 1941. Clearly visible on the nose of each aircraft is the Staffel emblem composed of a white-painted leaping and harpooned shark on a white-bordered, orange, and black shield.

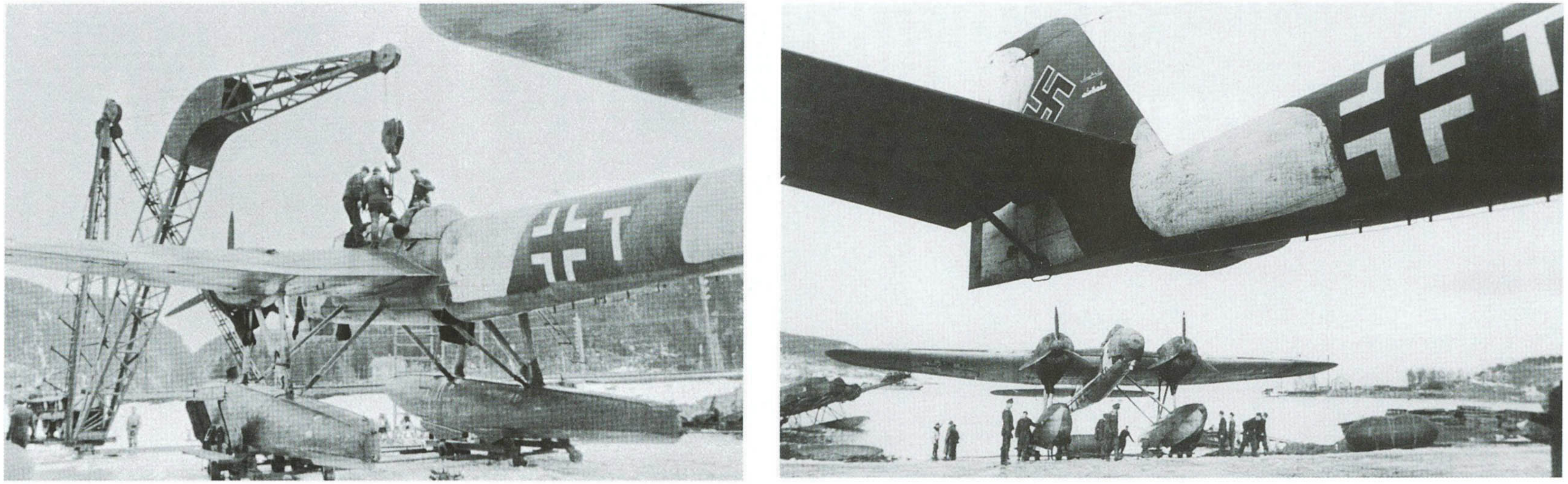




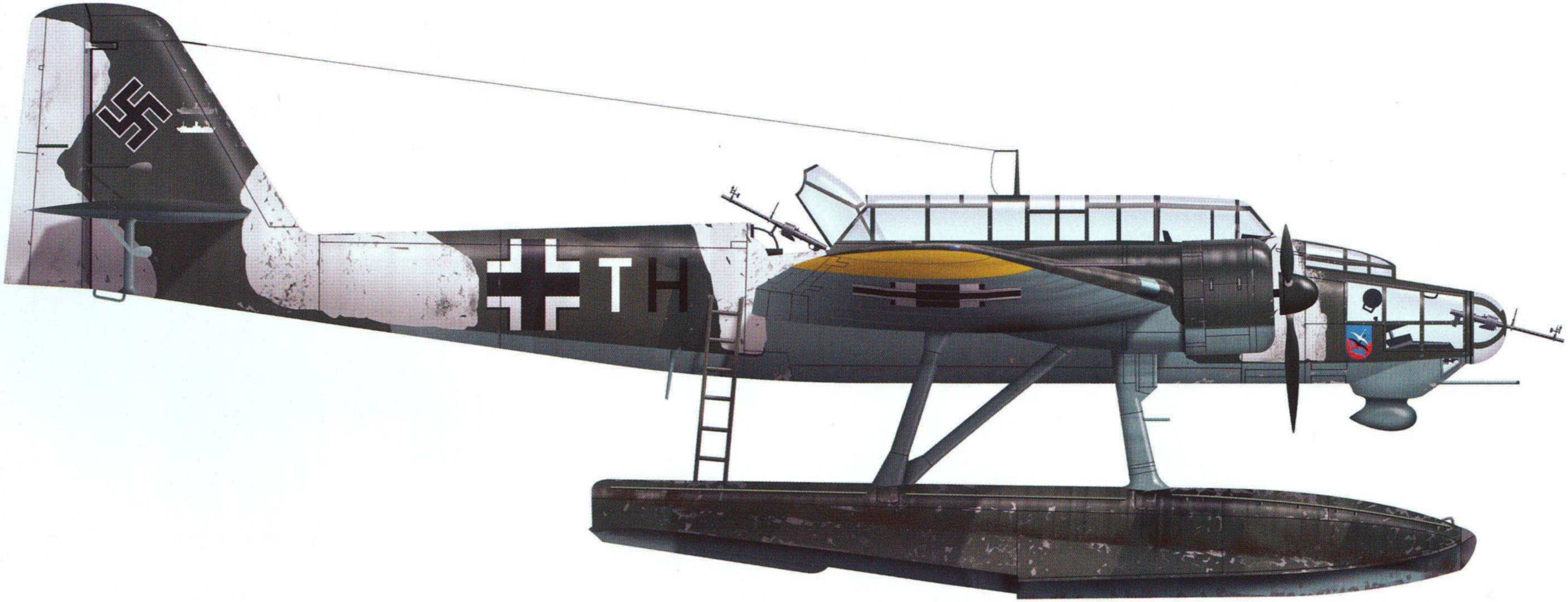
Above: Staffel personnel at work on a Heinkel He 115 B-1 of the 3./KFlGr.106 at either Borkum or Schellingwoude in mid-1940, shortly before the Staffel moved to Barth on the Baltic coast for conversion to the Junkers Ju 88.



Right: An undated view of Heinkel He 115 C-1, K6+GH, white 'G' of the 1./KFlGr.406 patrolling the Norwegian coastline.

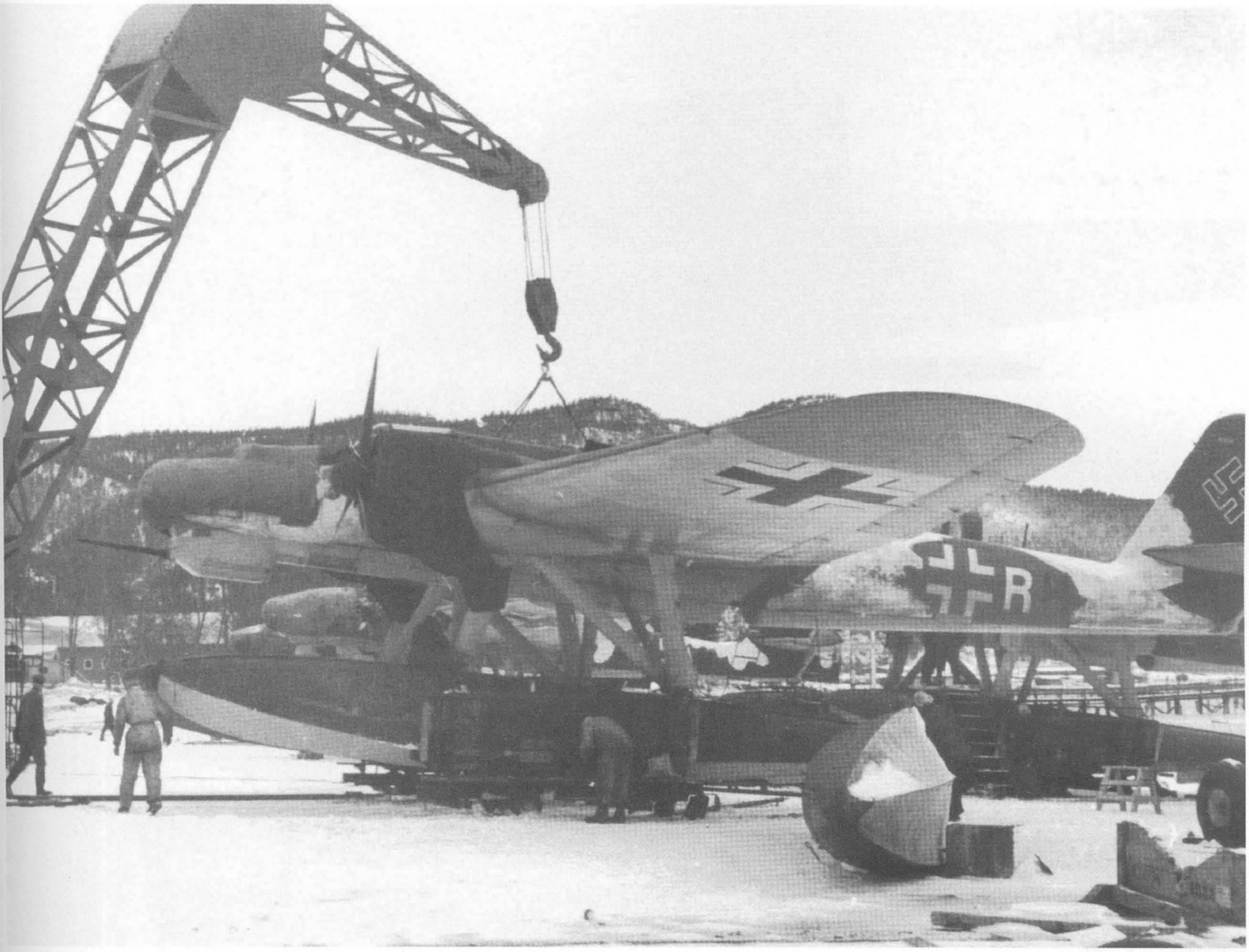


Two views of He 115 B-1, K6+TH of the 1./KFlGr.406 undergoing maintenance at Trondheim in 1942. The significance of the ship markings on the fin are believed to signify involvement in the 1942 attacks against the ill-fated Arctic convoy PQ 17.

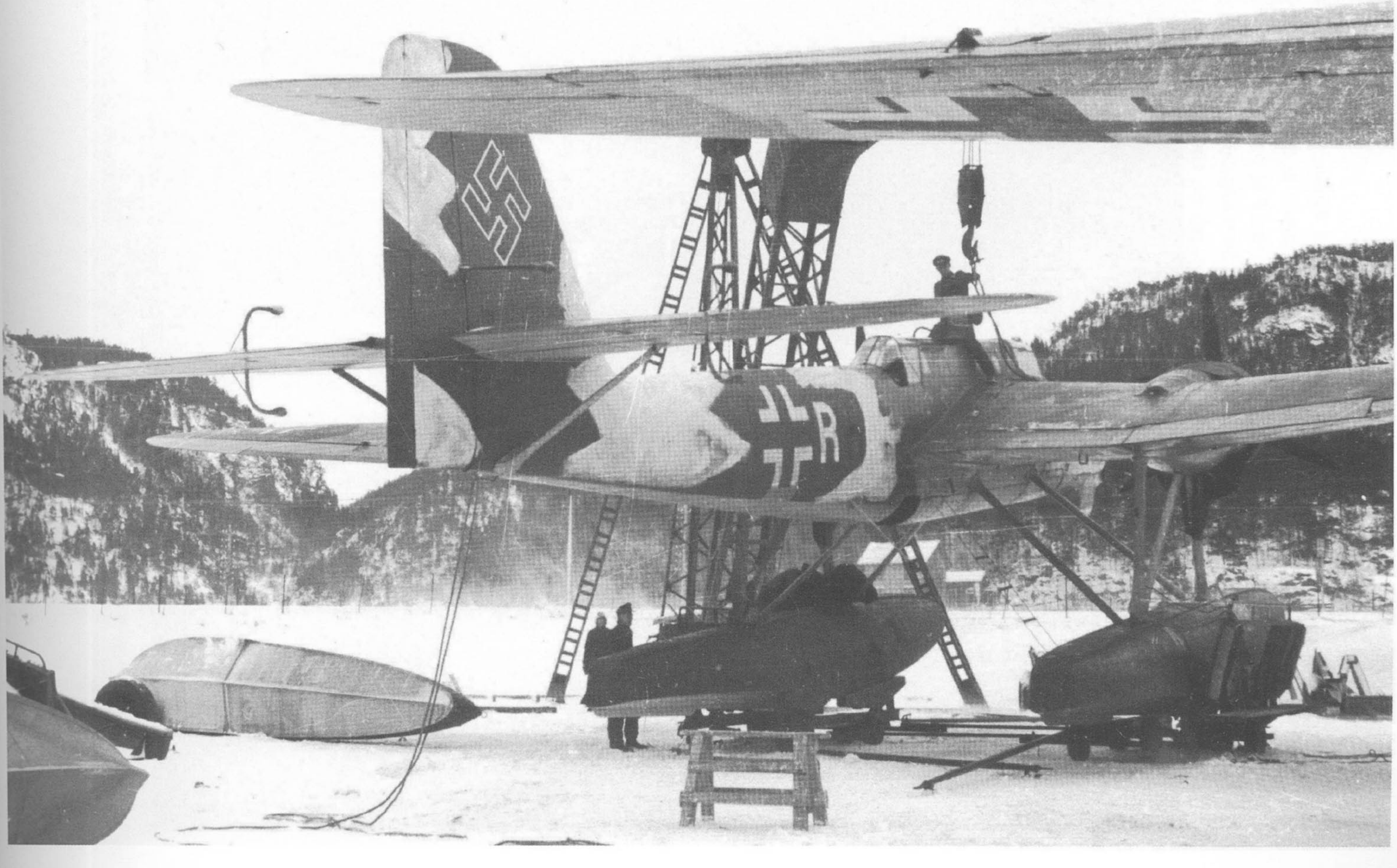


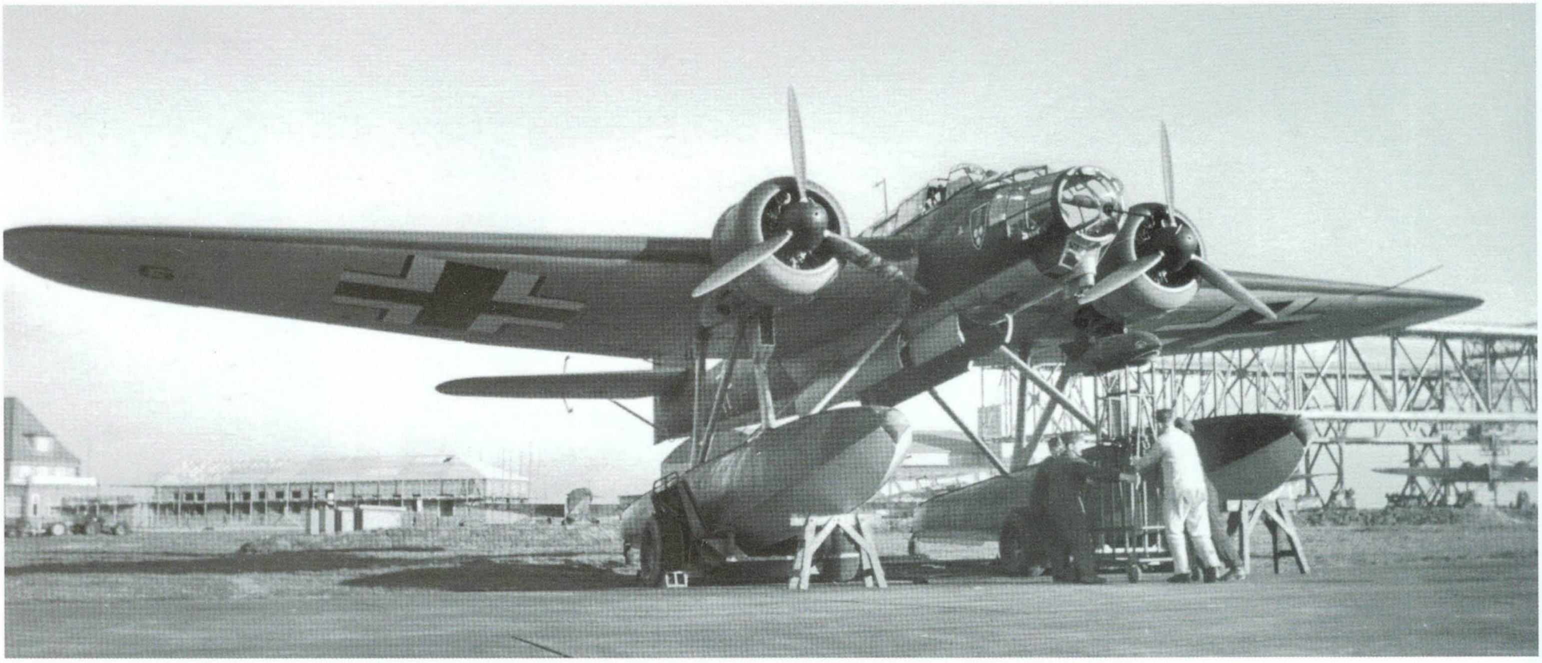
Heinkel He 115 B-1, K6+TH of the 1./KFlGr.406, Norway 1942

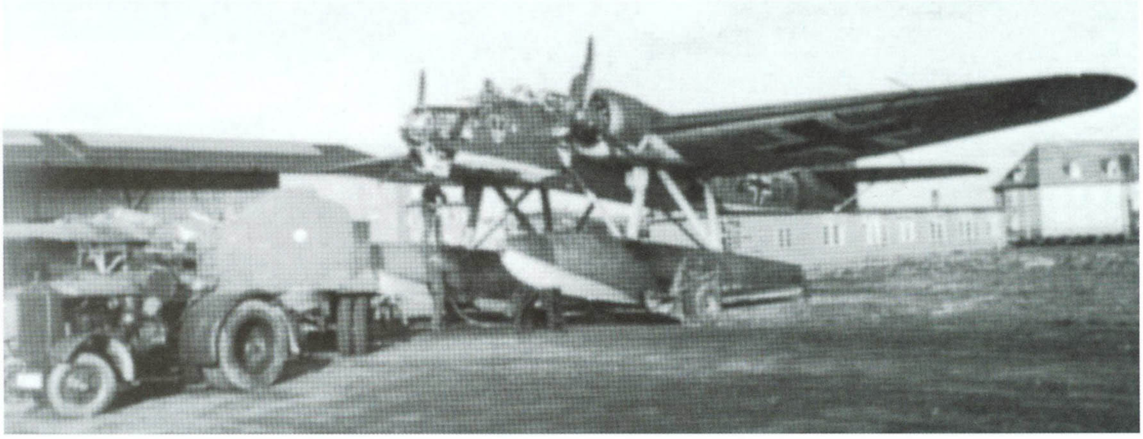
Although finished in the standard maritime colours of 72 and 73 over 65, areas of the upper surfaces have been over-painted with a temporary white finish to provide a more useful camouflage for over-water winter operations. The codes are painted black with the exception of the individual aircraft letter ‘T’ that is painted in the Staffel colour of white, as are the ship markings on the fin. In common with other aircraft of the Staffel, the lower surfaces of the wing tips are painted yellow.



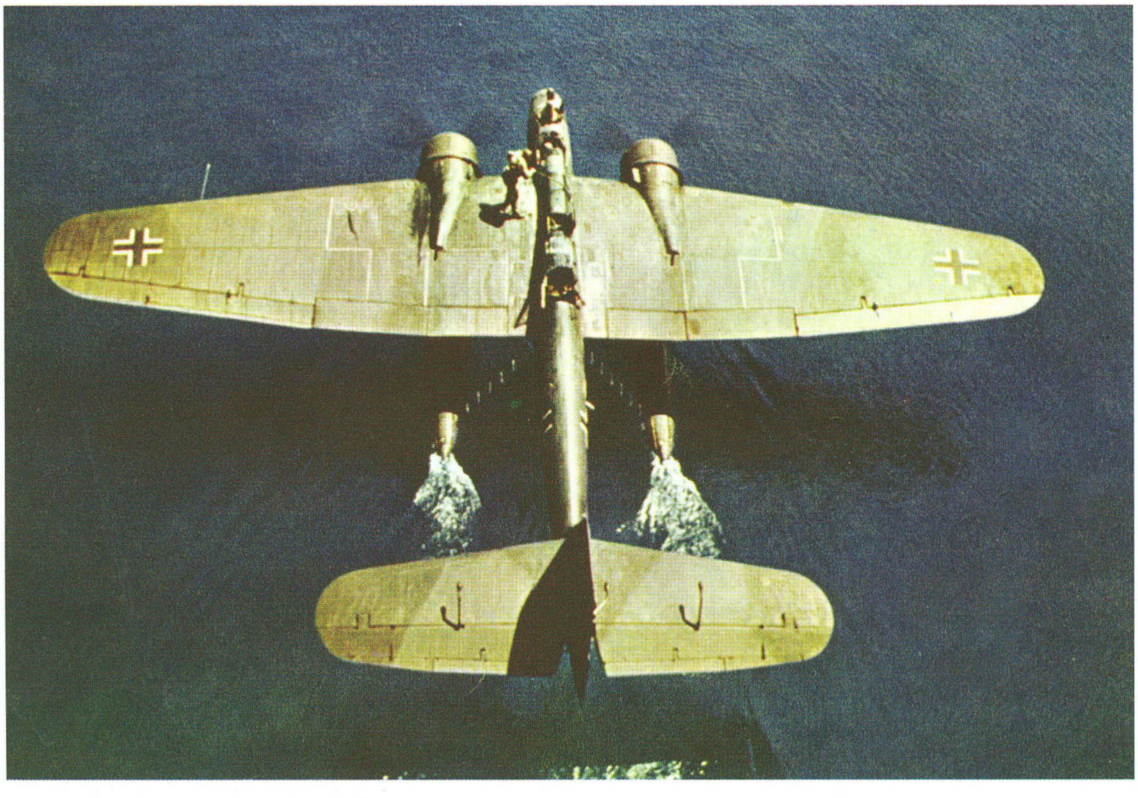
Wearing a partial temporary white finish over its standard 72 & 73 camouflaged upper surfaces, K6+RH, a Heinkel He 115 C-1 of the 1./KFlGr.406 is seen undergoing a float replacement at Trondheim during the winter of 1942.



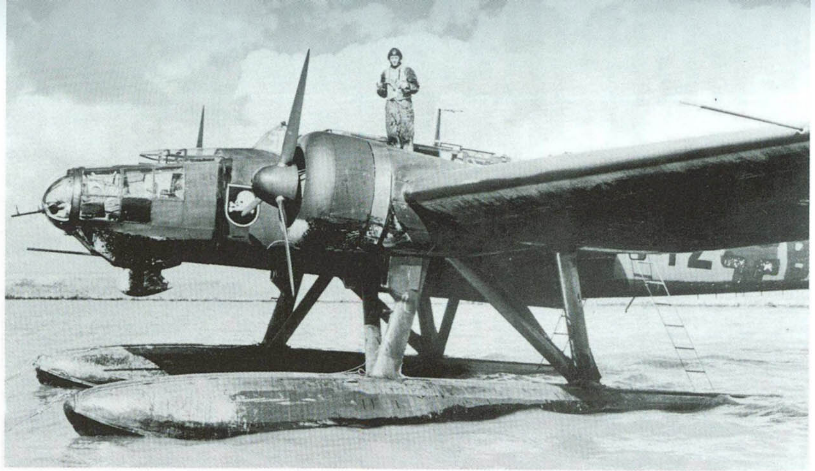


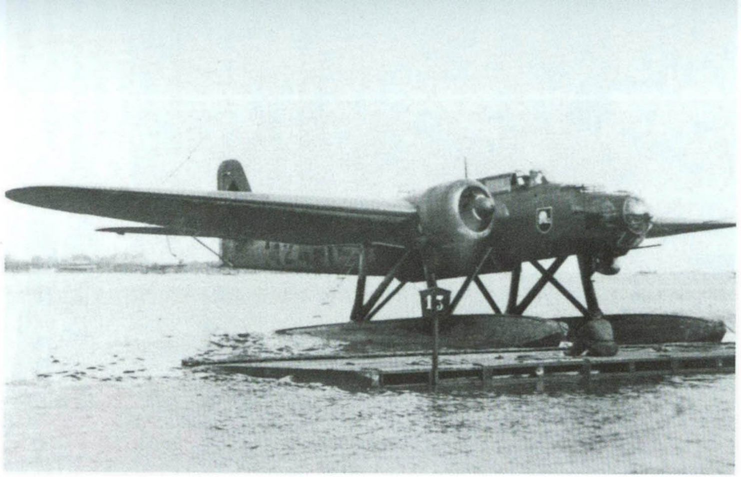


These two views of M2+GH, a Heinkel He 115B-1 of the 1./KFlGr.206 clearly display the Staffel emblem of three white dice and a brown cup within a white bordered black shield on each side of the nose. During May 1941 the Staffel became the 1./KGr.106 and on 1 September 1942, it was re-formed at Dinard as the Junkers Ju 88-equipped 4./KG 6.

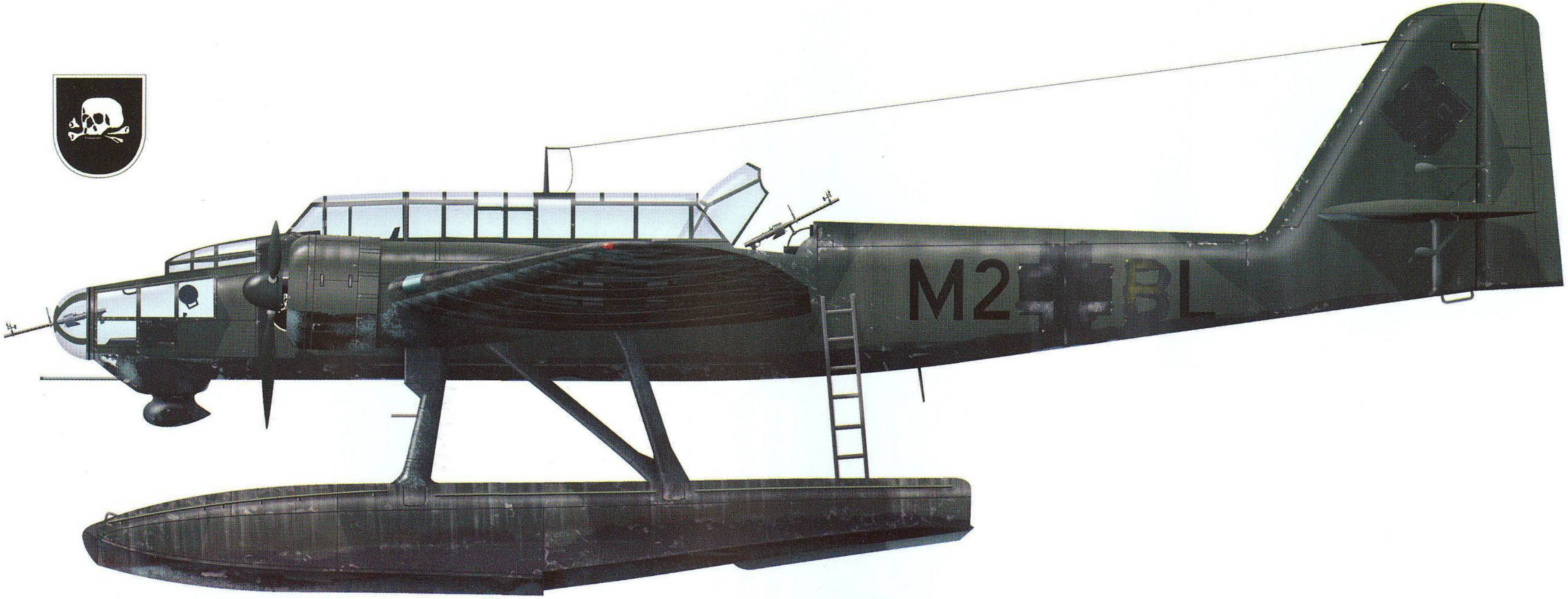


A well-known upper view in colour of a Heinkel He 115 which clearly displays the upper surface pattern of the 72 and 73 maritime splinter pattern applied to these aircraft.



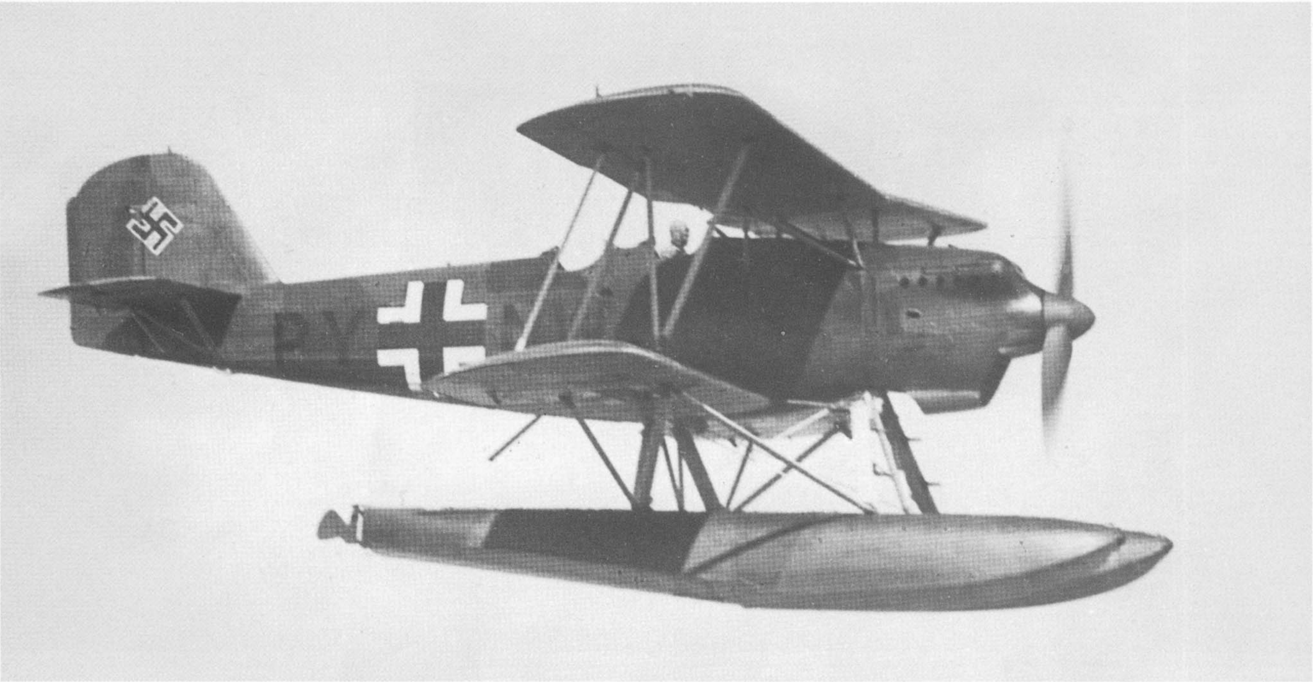


Photographed at either Borkum or Schellingwoude during 1940, these two views of M2+BL, a Heinkel He 115 B of the 3./KFlGr.106, clearly show the Staffel emblem consisting of a white skull and crossbones superimposed on a light-bordered black shield. In October 1940, the Staffel moved to Barth for conversion to the Junkers Ju 88 A and from May 1941 was redesignated as the 3./KGr.106.



Heinkel He 115 B, M2+BL of the 3./KFlGr.106 circa mid-1940

Although wearing the standard maritime colours of 72/73 over 65 with propeller blades and spinners in black-green 70, M2+BL has a temporary coating of black distemper-type paint roughly applied over the underside 65 blue, the yellow individual aircraft letter 'B' and white areas of the national markings. This was a common practice with operational Luftwaffe aircraft to make them less conspicuous when carrying out night operations.

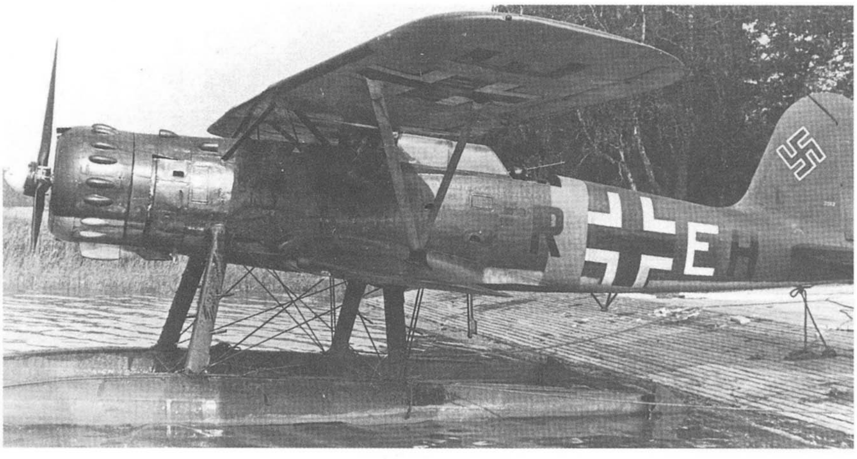


An in-flight view of Heinkel He 60 D-1, PY+NW wearing the standard maritime colours of 72/73/65. It carries the customary Balkenkreuz national marking in six positions and the swastika in the earlier position where it was bisected by the line between the fin and rudder assembly. Essentially similar to the C variant, the D series featured improved radio equipment and the addition of a forward firing MG 17 machine gun. This was the first maritime specific aircraft to be taken into operational service by both Aufklärungsgruppen (See) 125 and 126.

Aufklärungsgruppen (See)

Although reconnaissance units had operated over water since the inception of the *Luftwaffe*, it was not until 1941 that dedicated maritime reconnaissance *Staffeln* equipped with the appropriate aircraft began to be organized. With the completion of operations against Poland in October 1939, the *Luftwaffe* shifted its focus away from the Baltic to the mainland and North Sea coastal areas of Western Europe. While some *Küstenfliegerstaffeln*[1] remained in the Baltic area to watch Russian and Swedish shipping movements, the region effectively became a sideshow, with the *Luftwaffe* redeploying the bulk of its forces against France, the Low Countries, and Great Britain. This shift in emphasis allowed it to bolster the ranks of its land-based air units at the expense of its maritime aviation services. However, during early 1941 plans for Operation *Barbarossa,* the invasion of Russia, left *Luftwaffe* planners few options with which to strengthen their maritime aviation arm. The commencement of the invasion on 22 June 1941 once again re-focused the Baltic region as a primary war zone. As a result, the formation of *Fliegerführer Ostsee*[2] on 1 April 1941 brought for the first time the *Luftwaffe*'s own maritime air unit, *Aufklärungsgruppe* 125 (*See*)[3] to the forefront of operations.

Formed at Würzburg in April 1936, the *Gruppe* was faced with a lack of aircraft suitable for the maritime role and in October 1937 it was redesignated as the land-based reconnaissance unit, *Aufklärungsgruppe* 25. From then until 1941, the *Luftwaffe* had no dedicated maritime aviation units which it had formed and raised itself. With the invasion of Russia about to commence, several *Staffeln* were equipped with maritime aircraft to better facilitate operations in the East, having relied until then on land-based aircraft for operations over the sea or reconnaissance data received from the *Küstenfliegerstaffeln*. With the widening of the war, the *Luftwaffe* now sought a better means of prosecuting operations over the Baltic. Initially, with only the intention of covering the Baltic, *AufklGr.*125 (*See*) was re-formed in April



Far left: This Heinkel He 114 A, 7R+EH of the 1./Aufklärungsgruppe (See) 125 is stated as being moored at either Pärnu or Helsinki while operating under FlFü. Ostsee in the latter months of 1941. In common with other maritime aircraft, it wears a camouflage of 72/73 over 65. The aircraft letter 'E' is in the Staffel colour of white and is repeated beneath the outer wings in black. The propeller spinner is also painted white and a narrow yellow theatre band has been applied around the fuselage immediately ahead of the fuselage Balkenkreuz.

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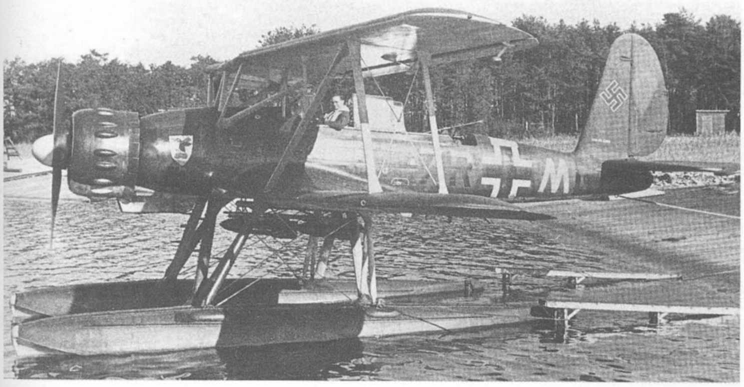
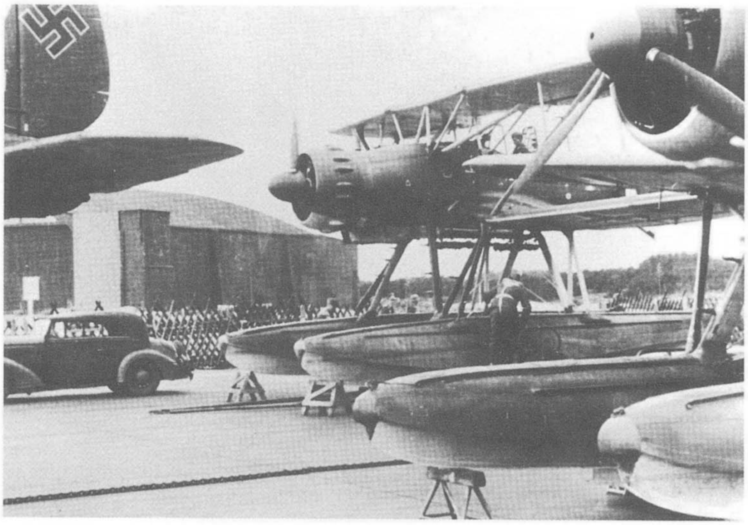
[1] Coastal Flying Squadrons.

[2] Flight Leader Baltic.

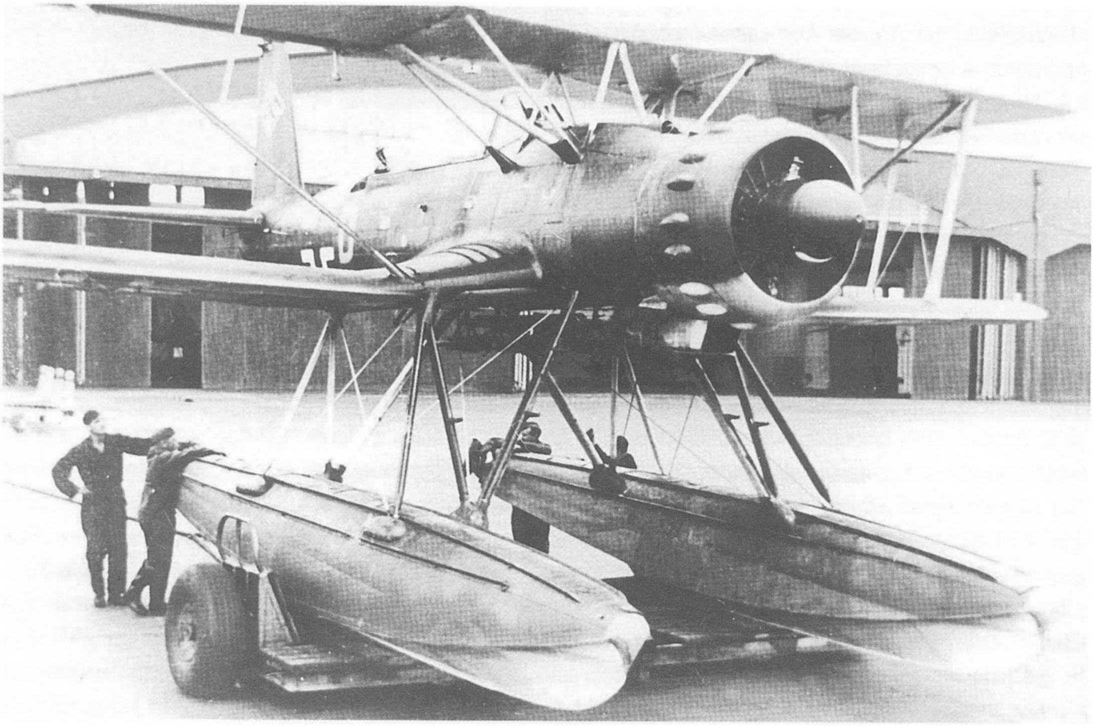
[3] Reconnaissance Group 125 (Sea).



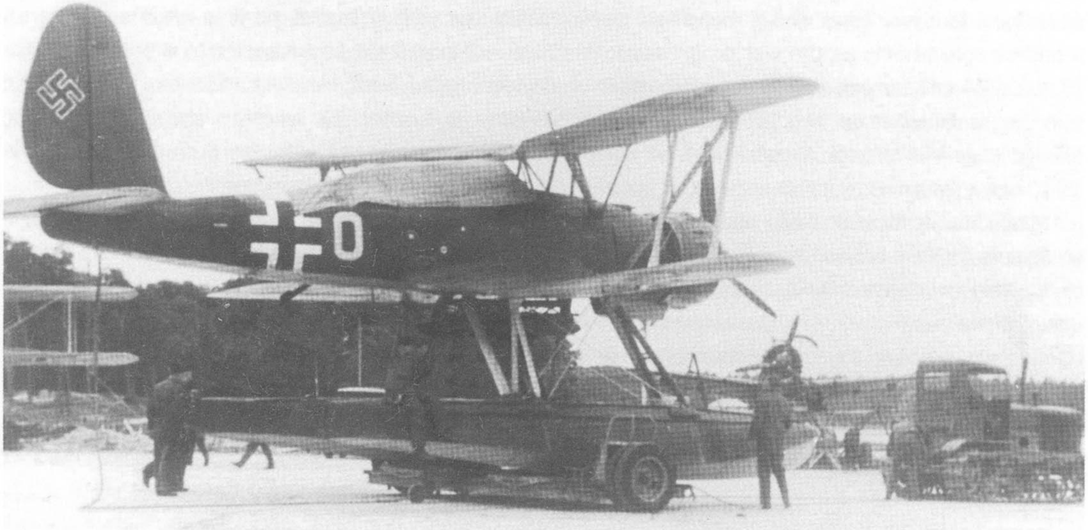


Above: An undated view of Arado Ar 95A 7R+ML of the 3./Aufklärungsgruppe (See) 125 moored at an unknown location at either Fischhausen, East Prussia or Helsinki between August and September 1941. Finished in the standard maritime upper splinter camouflage of 72/73 with 65 under surfaces, the aircraft letter 'M', forward section of the spinner and (apparently) the tips of the floats were painted in the Staffel colour of yellow. A narrow yellow theatre band was applied around the rear fuselage behind the Balkenkreuz. Although like the Heinkel He 60 and Heinkel He 114, the Arado Ar 95 was obsolescent by 1941, it provided sound and continuous service until progressively replaced by the Arado Ar 196 and Blohm und Voss Bv 138.

Above: A second view of some of the Arado Ar 95 A-1s of the 3./Aufklärungsgruppe (See) 125 at either Riga or List in late 1941. Initially under the control of the Fliegerführer Ostsee during the early stages of Operation Barbarossa, by early 1942 the Staffel had moved to Constanza, Romania from where it operated under the control of Fliegerführer Süd. In early 1943, the Staffel moved to Varna, Bulgaria on the Black Sea coast where it re-equipped with the three-engined Bv 138 seaplane. In July 1943, the Staffel was re-formed at Varna as the 3./SAGr.125 and, remaining in the Black Sea, operated under the Fliegerführer Schwarzes Meer until returning to List where it was disbanded on 5 September 1944.



Mounted on its beaching trolley, Arado Ar 95 A-1, 7R+DL of the 3./Aufklärungsgruppe (See) 125 is seen running-up its 880 hp BMW Dc radial engine at either Riga or List in the latter half of 1941.



Sitting on its beaching trolley with its cockpit and canopy shrouded against the winter weather, Arado Ar 95 A-1, 7R+OL of the 3./Aufklärungsgruppe (See) 125 is being prepared for towing by a tracked tractor at either Riga or List during the winter of 1941.

The *Luftwaffe's* Estonian Volunteer Aircrew

With the capture and solidification of German positions in the Baltic, in early 1942 the operations of *AufklGr.*125 (*See*) were supplemented by a small band of Estonian volunteers. Very little is known about the particular unit otherwise known as *Sonderstaffel*[4] Buschmann, but it was a coastal patrol unit formed sometime around 12 February 1942 with a core of Estonian volunteers. Under the command of an ethnic German from Tallin, *Oberleutnant* Gerhard Buschmann, its first combat patrol was on 11 March 1942 by a PTO-4 aircraft in the Gulf of Finland. For the short period of its existence, the unit operated Ar 95 floatplanes, at least two ex-Polish RWD-8s and four ex-Estonian PTO-4 aircraft. At its peak, the unit also operated 34 He 50 and 13 Fokker C-VEs. The unit was disbanded in April 1943 and its personnel and aircraft absorbed by the 1./*AufklGr.*127 (See).

1941 and equipped with short-range Arado Ar 95, Heinkel He 60 and He 114 aircraft. Although these types initially proved adequate in their intended roles, as the war progressed they were increasingly outclassed by Allied aircraft and gradually replaced with the more modern Arado Ar 196 and Blohm und Voss Bv 138.

In 1941, the *Gruppe* was subordinated to *Luftflotte 1* and in conjunction with *Kampfgruppe* 806[5], operated as far as latitude 13º East in the Baltic. Primarily engaged in searching for Soviet submarines, the *Gruppe* frequently reconnoitred the Soviet naval anchorages at Kronstadt and Leningrad and provided aerial escorts for merchant convoys sailing through the region. Interestingly, one of the first pilots assigned to the *Gruppe* was *Oberleutnant zür See* Rolf Thomsen who, having been seconded to the *Luftwaffe* in 1940, returned to naval duties in 1941 and went on to a successful career as the captain of the Type VIIC U-boat, U-1202.

In 1941 the *Luftwaffe* was not only preparing for operations over the Baltic but was also expanding into the Mediterranean, which required the formation of a second maritime flying group for operations there. At the same time that *AufklGr.125* (*See*) was being raised, the *Luftwaffe* was in the process of equipping a second group at Travemünde – the *Aufklärungsgruppe* 126 (*See*) – for operations in the Mediterranean. While *AufklGr.*125 (*See*) went into action almost immediately over the Baltic, *AufklGr.*126 (*See*) spent April 1941 preparing for a move to Skaramanga in Greece, where it arrived on 9 May 1941. Unlike its sister unit, *AufklGr.*126 (*See*) initially operated only the He 60 while performing the same tasks of anti-submarine patrols, reconnaissance, and convoy escort duties. As with *AufklGr.*125 (*See*), one of the founding aircrew members of *AufklGr.*126 (*See*) – *Leutnant zür See* Paul Brasack – went on to serve with distinction in the *U-bootwaffe*[6] on board the U-530 and U-737, ultimately concluding his career as a *Kapitänleutnant* and the *Torpedos-Ausbildungsoffizier* with the 25.*U-Flottille*, Libau[7].

As with the *Küstenfliegergruppen*, the *Luftwaffe* relied on naval officers to fill gaps in not only its aircrew, but also in its training regime. In the pre-war years each successive class of *Kriegsmarine* officer cadets (known as a *Besatzung*[8] followed by the double-digit year of their enrolment) had a portion of its graduates assigned to flying duties with maritime flying units, while others were seconded to *Luftwaffe* service. Naval officers were employed primarily as specialist observers, trained as they were in matters of navigation at sea and artillery spotting. During the pre-war years, these assignments were for a four-year term and if the officer survived his tour with a *Staffel*, he was returned to a truly maritime role where, as the war progressed, this frequently resulted in a transfer to the *U-bootwaffe*. Of the 294 officer cadets accepted as part of *Besatzung* 34 in April 1934, 15 were selected for permanent transfer to the *Luftwaffe* as aircrew while a further 36 went to the *Luftwaffe* and *Küstenfliegerstaffeln* 'on loan'. Those of the 51 still on active service with the *Luftwaffe* in October 1940 were returned to naval service.

While the *Luftwaffe* made every effort in pre-war training schools to produce thoroughly trained observers for land-based units, it lagged behind in its training of observers destined for service almost exclusively over water. As a result, it was considered that naval officers were best suited to such occupations, with their nautical experience and specialist training. The failure of the *Luftwaffe* to adequately prepare its own aircrew for over-water operations even extended to the inadequate instruction on the types of armament available with which to prosecute the war at sea. Although aircrew

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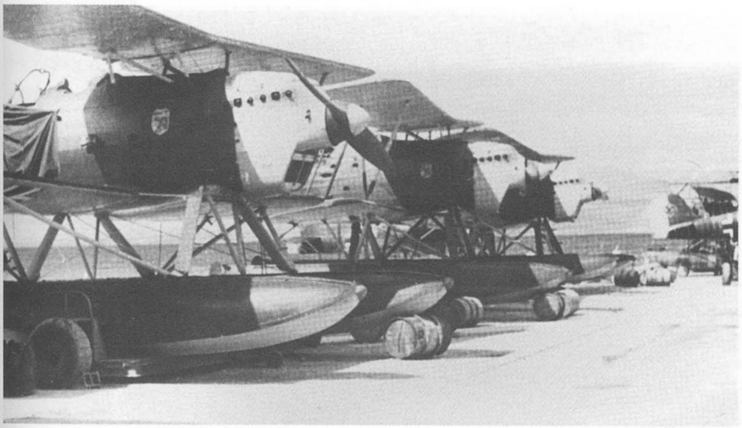
[4] Special squadron.

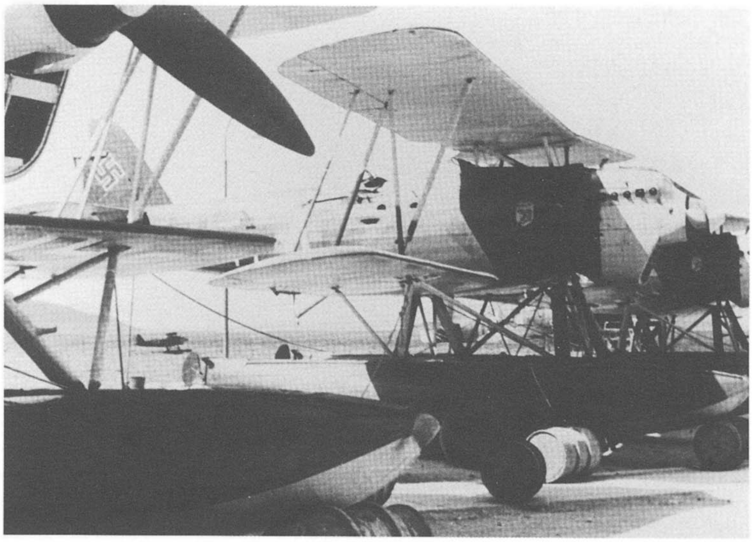
[5] Bomber Group 806, previously *KüFlGr.*806.

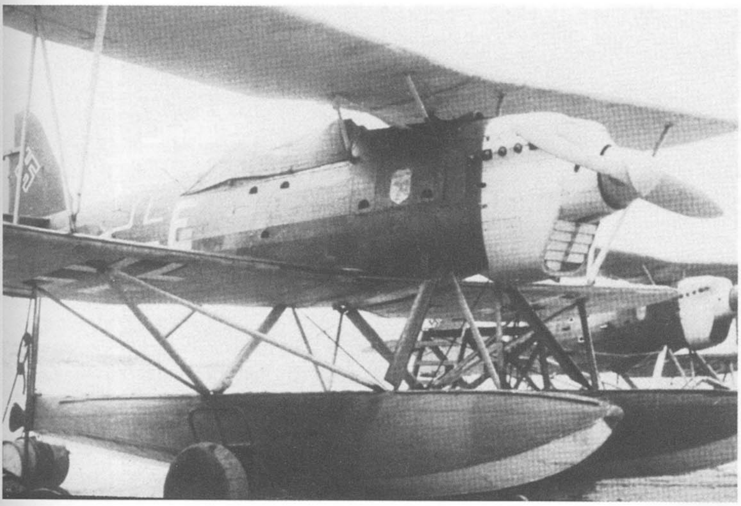
[6] U-boat forces.

[7] Torpedo Training Officer, 25th U-Boat Flotilla in Libau.

[8] Crew.







These three views show Heinkel He 60 Cs of the 1./Aufklärungsgruppe (See) 126 lined up at their base at either Skaramanga or Volos in the eastern Mediterranean in 1942. Sporting white rudders and cowlings, each aircraft carried the unit emblem of a blue-coated boy with a telescope on each side of the forward fuselage.

destined for service with the *Küstenfliegerstaffeln* were routinely sent for instruction at the torpedo school at Großenbrode, it was not until mid-1941 that an instructional group was set up for *Luftwaffe* crews destined for operations over the sea. Even then, the training which these crews received had only an improvised character about it; consequently, what efforts the various *Seeaufklärungsgruppen* did expend on the air war at sea was necessarily limited.

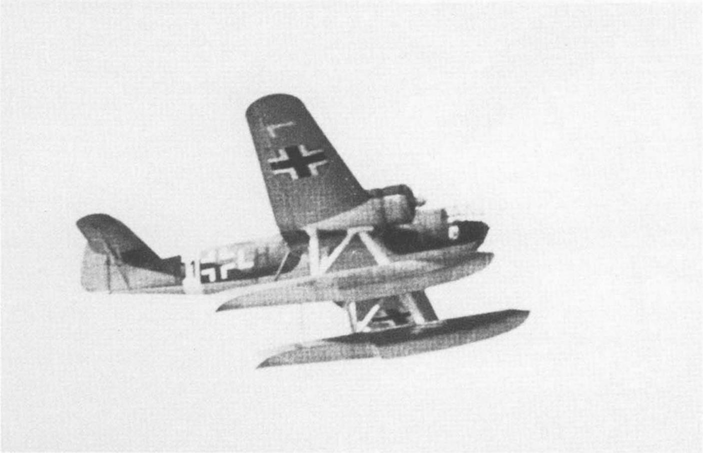
Rapid early German advances in Russia saw a significant new area of operations added to *Luftwaffe* maritime duties following the capture of the Black Sea port of Odessa in October 1941. Although determined Soviet resistance had greatly hindered German and Romanian efforts to seize the port, Hitler's belief that its subsequent capture – on 16 October – would favourably influence the attitude of neutral Turkey, saw an increasing number of land-based *Staffeln* transferred to the Crimea.

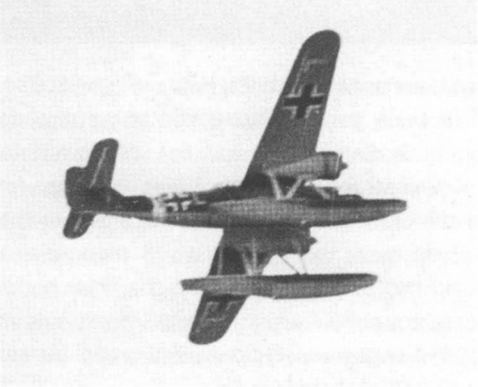
On 27 October 1941, *Fliegerführer Ostsee* was disbanded with its staff and *AufklGr.*125 (*See*) transferred south after a period of rest in Germany. On 1 December 1941, *FlFü Ostsee* re-formed as *FlFü Süd*, again overseeing the operations of elements of *AufklGr.*125 (*See*) now based in the Crimea. Significantly, the subsequent build-up of flying units in the region did not include a reinforcing of *AufklGr.*125 (*See*), which in July 1942 was the only maritime flying group listed in the *Luftflotte* 4 Order of Battle. By predominance, the *Luftwaffe*'s maritime air units were deployed instead in the Mediterranean.

While *AufklGr.*125 (*See*) toiled against Russian coastal emplacements and shipping, a significant responsibility for *Oberstleutnant* Herbert Kaiser's *AufklGr.*126 (*See*) in the Mediterranean was that of convoy escort. Its ubiquitous seaplanes, sometimes described as 'a girl in every port' attempted to secure Axis shipping lines supplying Rommel's *Afrika Korps*.

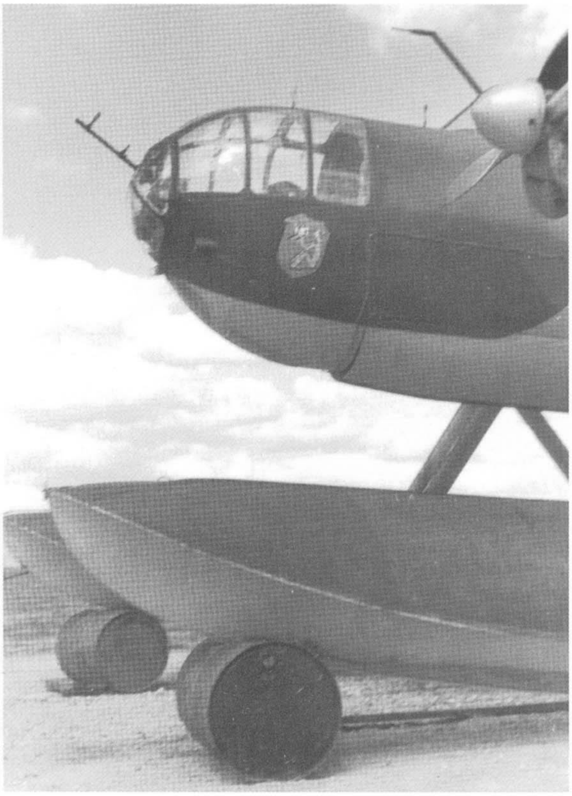
With poor production rates often hampering *Luftwaffe* attempts to expand its maritime *Staffeln*, it frequently relied on captured aircraft to cover these shortcomings. In the lead up to the Second World War, there was an increasing interest in naval aviation. In the Netherlands, the T.VIII-W project was launched in 1937 in response to official specifications issued by the Dutch navy calling for a new twin-engine seaplane capable of carrying a torpedo inside its fuselage (with the option of substituting this type of armament with ordinary bombs) to be used principally in coastal defence. In 1938, a design by Fokker led to the award of a contract for five production aircraft. These five aircraft were completed in June 1939 and, despite certain technical problems, the Dutch navy was sufficiently satisfied with the design that an order was placed for a further twenty-six examples.

The German offensive in the West during the spring of 1940 saw the occupation of the Fokker factory before those aircraft in production had been completed; once built they were all requisitioned into German service. Almost exclusively, they went into service in the Mediterranean, with twenty-eight of the thirty-six aircraft built entering front line service, with the majority serving with the successor to the old *Aufklärungsgruppen* (*See*) and *Küstenfliegergruppen*: the *Seeaufklärungsgruppen*.

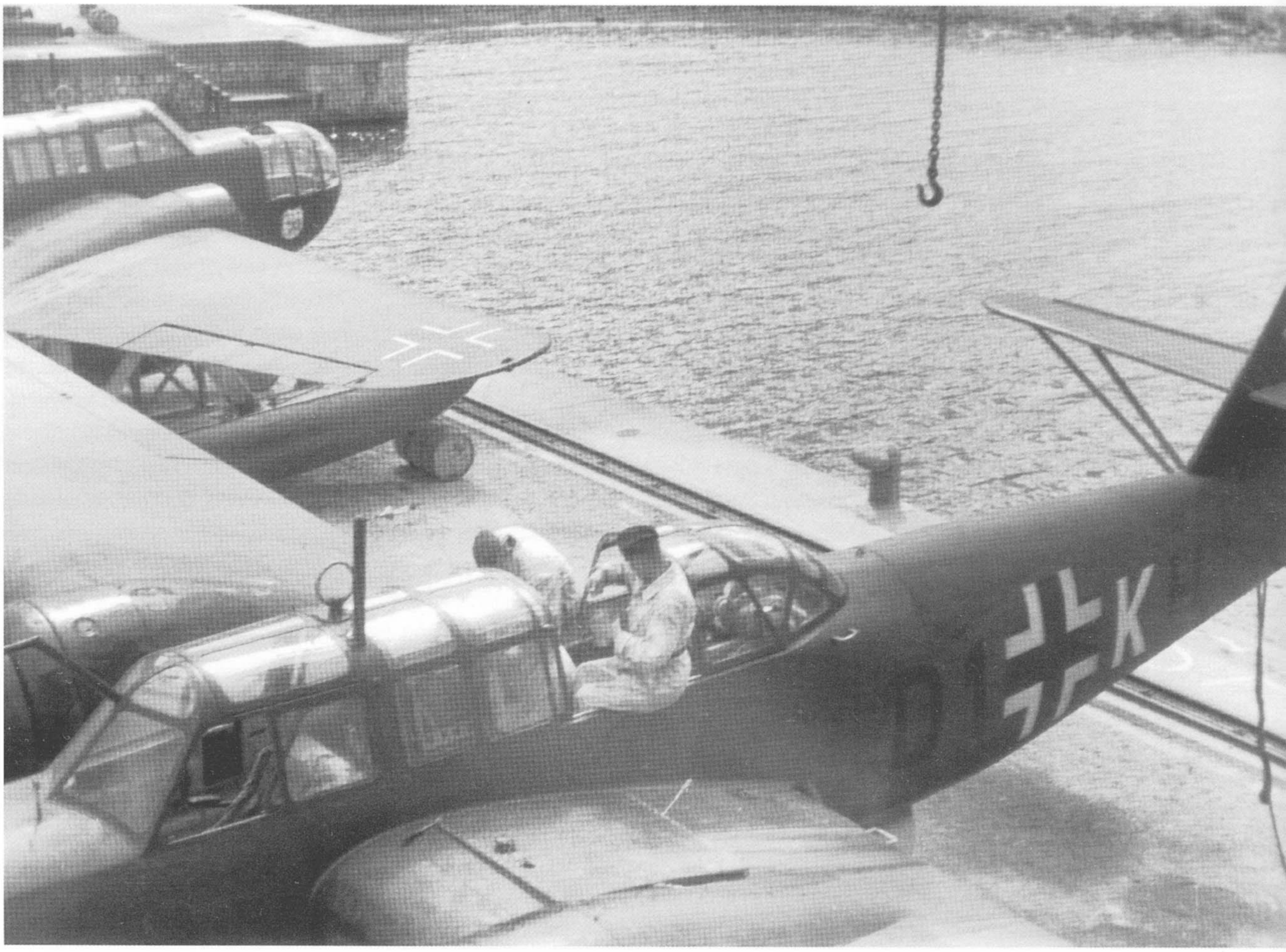




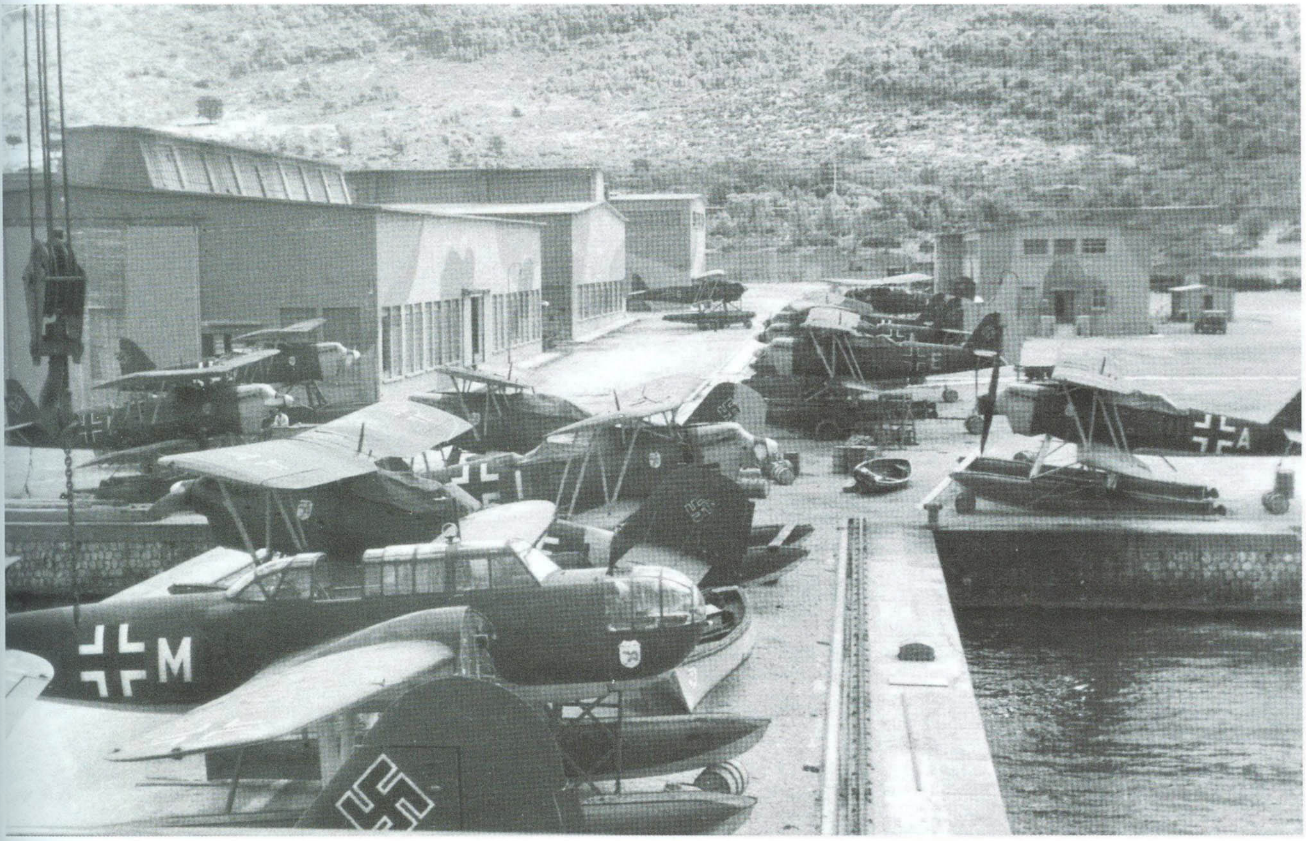
Two views of Fokker TVIII D1+LH of the 1./AufklGr.(See) 126 airborne from either Skaramanga or Volos in early to mid 1942. Probably finished in the maritime scheme of 72/73/65, it carries a white theatre band around the rear fuselage and the Staffel emblem on the nose. The aircraft letter 'L' on the fuselage is in the Staffel colour of white and, unusually, is repeated beneath each wing in the same colour rather than the more usual black.



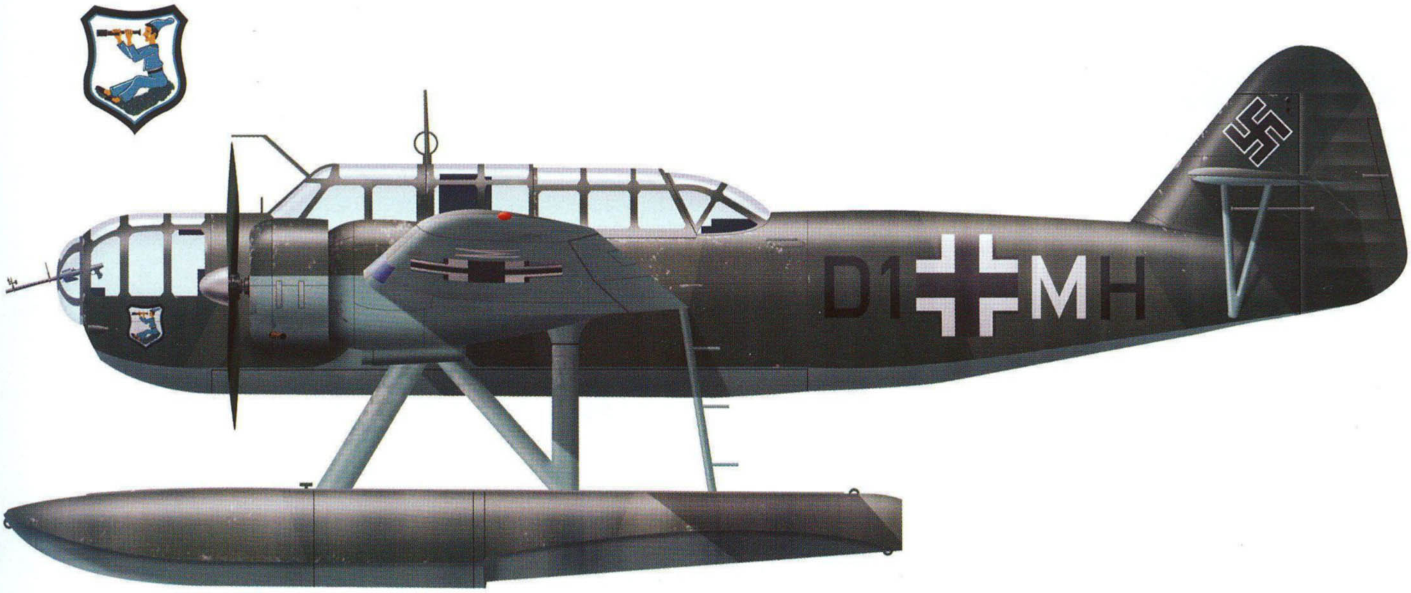
This low-angle close-up view of the nose of a 1./AufklGr.(See) 126 Fokker T VIII clearly shows the Staffel emblem of a seated, blue-suited boy peering through a telescope. This emblem was retained when the unit re-formed as the 1./SAGr.127 in July 1943. The Staffel disbanded at Libau in October 1944.



Fokker T VIII, D1+KH of the 1./AufklGr.(See) 126 is seen here undergoing maintenance in the cockpit area. What appears to be a white line on the top of the wing is actually a screwdriver wedged beneath a partially unsecured panel.

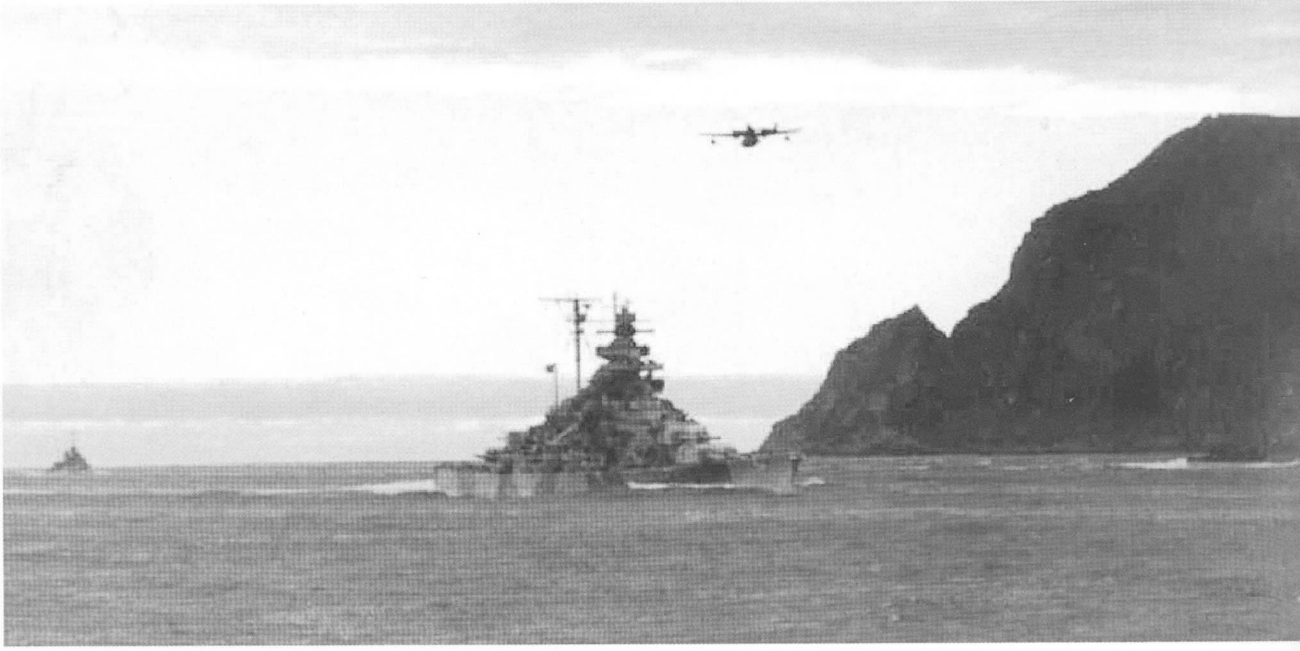


Captured Dutch-built Fokker TVIIIs in service with the 1./AufklGr.(See) 126 seen sharing the quayside at the Grecian port of Skaramanga with Heinkel He 60s of the same Staffel.



Fokker T VIII, D1+MH of the 1./AufklGr.(See) 126

This aircraft was finished in the standard maritime camouflage scheme of 72/73/65 with the individual aircraft letter 'M' applied in the Staffel colour of white. Although the white theatre band has yet to be applied to the rear fuselage, the Staffel emblem of a blue-suited boy with a telescope has been applied to both sides of the nose.

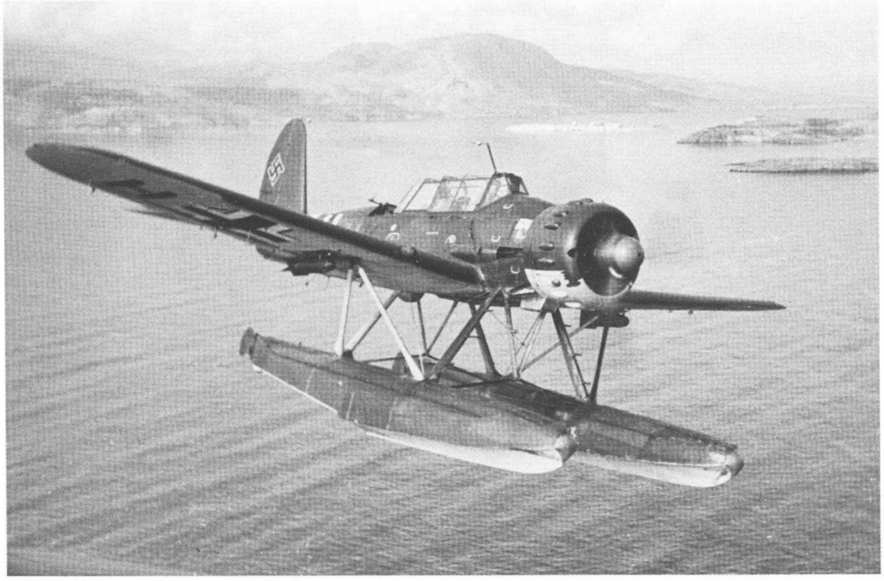


A patrolling Blohm und Voss Bv 138 passes above the Tirpitz and one of her destroyer escorts as she returns to her Norwegian anchorage. Although the date of this photograph is uncertain, Tirpitz wears her camouflage pattern of late 1943 which suggests that it may have been taken on her return to Altenfjord following the conclusion of Operation 'Sizilien' in early September 1943. If this assumption is correct then it is thought likely that the Bv 138 may well be from the newly formed 3./SAGr 130 which flew in support of the operation.

This creation of the *Seeaufklärungsgruppen* during 1943 saw the dissolution of all but two of the *Küstenfliegerstaffeln*[9], with the new units being created almost exclusively by simply re-forming the former coastal *Staffeln*. Eventually deployed to all combat theatres, the new units were increasingly equipped with the much longer-ranging flying boat, the Blohm und Voss Bv 138.

The Allied landings in French North Africa on 8 November 1942 introduced a new dimension to the North African campaign. British pressure in the western desert had seen Rommel repeatedly pull his forces back into pre-prepared positions under the increasing weight of Allied superiority. These landings, code-named Operation *Torch*, now saw the *Afrika Korps* effectively fighting a two-front war in North Africa. Although the landings increased Allied naval movements in the Mediterranean and Atlantic, German maritime air operations were not increased commensurate with the efforts required to operate against such Allied activities. Henceforth, German maritime aviation operations were carried out in increasingly difficult circumstances as Allied air superiority became more evident. As the Allies closed the ring around the retreating German forces, eventually trapped in Tunisia, an increasingly important role was placed on the *Luftwaffe* maritime *Staffeln* in the area: that of air escort for the slow-moving Ju 52 and Bv 222 transport aircraft.

7R+HK, Arado Ar 196 A-3 of the 2./AufklGr.(See) 125 seen here airborne from its base at Suda Bay, Crete in the summer of 1942. In December 1943 the Staffel exchanged its Arados for Blohm und Voss Bv 138s and became the 2./SAGr.125. It was disbanded at Mamaia in June 1944.



In order to ferry in supplies to try to stem Allied advances in North Africa, the Germans began air- and sea-lifting vast quantities of men and material into Tunisia where it came together as *Generaloberst* Jürgen von Arnim's *5. Panzerarmee*[10]. In order to support the aerial side of such an operation, '*Pulks*'[11] of up to 100 aircraft operated between Italy and North Africa. As with the airlift to Corsica during August and September 1943, the maritime *Staffeln* provided a significant portion of the aerial escort. However, with Axis forces in North Africa surrendering there on 13 May 1943, the airlift was short-lived.

The loss of North Africa was soon followed by Operation *Avalanche*,

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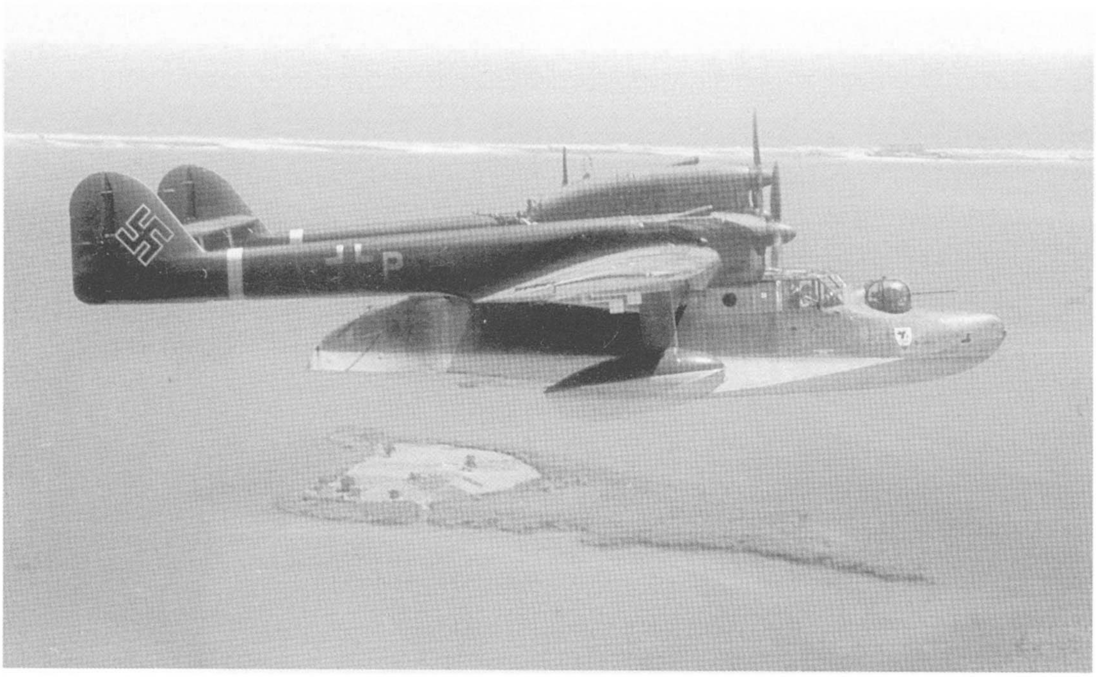
[9] Shortly after the issue of the amendment order, the 1./906 was re-formed as the 8./KG 26, exchanging its Heinkel He 115s for torpedo-carrying Junkers Ju 88s.

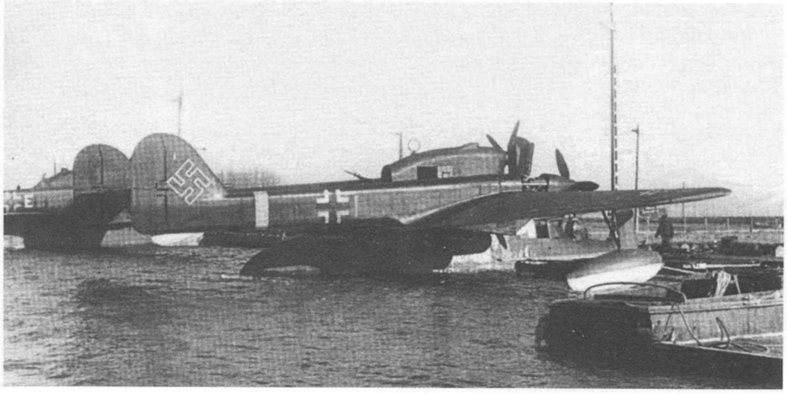
[10] 5. Panzer Army.

[11] Slang term for a group or crowd.



Blohm und Voss Bv 138 C-1 7R+PL of the 3./SAGr.125 photographed cruising above a placid and sun-drenched Black Sea during the early summer of 1944.

which saw Allied forces landing at Salerno in mid-August 1943. With the Axis position in the Mediterranean faltering and an Italian surrender imminent, German attentions were necessarily drawn to Corsica. Initially reinforcements were sent, but landings at Ajaccio by Free French forces led the *Oberbefehlshaber Süd-West und Heeresgruppe C*[12], Albert Kesselring, to order a withdrawal of the 30,000-man garrison by sea and air. While *Transportfliegerführer 1*[13] had 156 aircraft with which to complete the evacuation, the only escort and protection aircraft available were the Arado Ar 196s of the *SAGr* 126. However, although more appropriate aircraft soon reinforced them, escort duties for maritime air units were becoming an increasing application in the air war.



A pair of Blohm und Voss Bv 138 C-1s of Seeaufklärungsgruppe 125 seen moored at either Sevastopol or Mamaia in early 1944. The farthest aircraft is coded 7R+EH ; it is from the 1.Staffel and has the aircraft letter applied in the Staffel colour of white, while that closest to the camera, 7R+IL, is from the 3.Staffel and has the individual aircraft letter applied in yellow.

On the Eastern Front, the failure of Operation *Citadel*, the German summer offensive during July 1943, so destabilized the German position in Russia that withdrawal was inevitable. As the Eastern Front began collapsing under increasing Soviet pressure, in the Crimea the Germans began pulling back through the Kuban bridgehead during August–October 1943. *Fliegerkorps* IV[14] provided what little air support was available for this operation but by mid-October 1943, the only air support in the region was that provided by *Oberstleutnant* Schalke's *Seefliegerführer Schwarzes Meer*[15]. As resources were shifted away from the ailing sector by the *OKL*, by the end of May 1944 all that remained in the region were 15 Bv 138s of *SAGr* 125.

With an increasing need for reconnaissance data on Allied shipping movements in the North Atlantic and North and Arctic Seas, *Luftwaffe* maritime air units were increasingly stationed in Norway where they operated under the control of *Luftflotte* 5. It was there that the *Seeaufklärungsgruppen* 130 and 131 were stationed, along with *Küstenfliegerstaffel* 406 and the remainder of *Bordfliegergruppe* 196. Despite this concentration, it was becoming increasingly clear that Germany's maritime aviation was fighting a losing battle. Allied air superiority and the increasing numbers of long-range interdicting aircraft such as the De Havilland Mosquito and Bristol Beaufighter, severely restricted the freedom of operations it had once enjoyed. As a result, by the close of 1944, German maritime aviation was increasingly marginalized with the last remaining operations conducted being in support of beleaguered troops in the Courland Peninsula.

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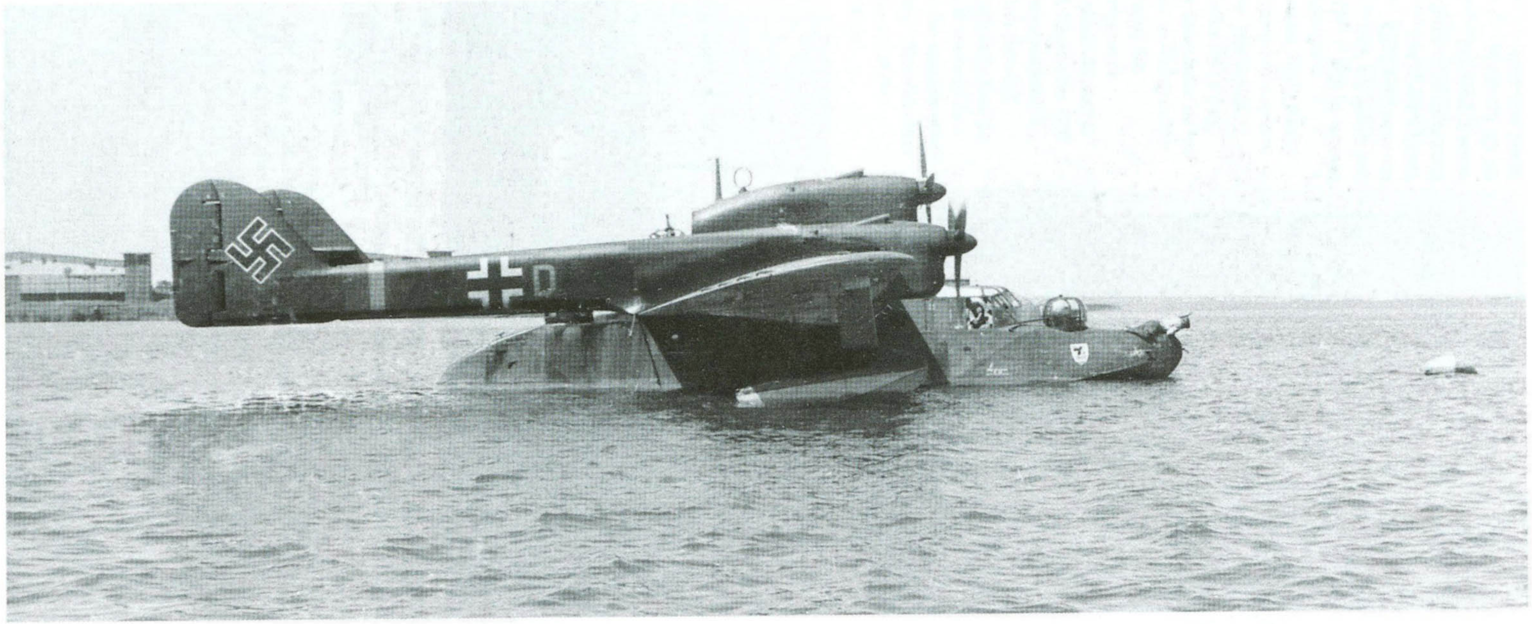
[12] Commander in Chief South-West and Army Group C.

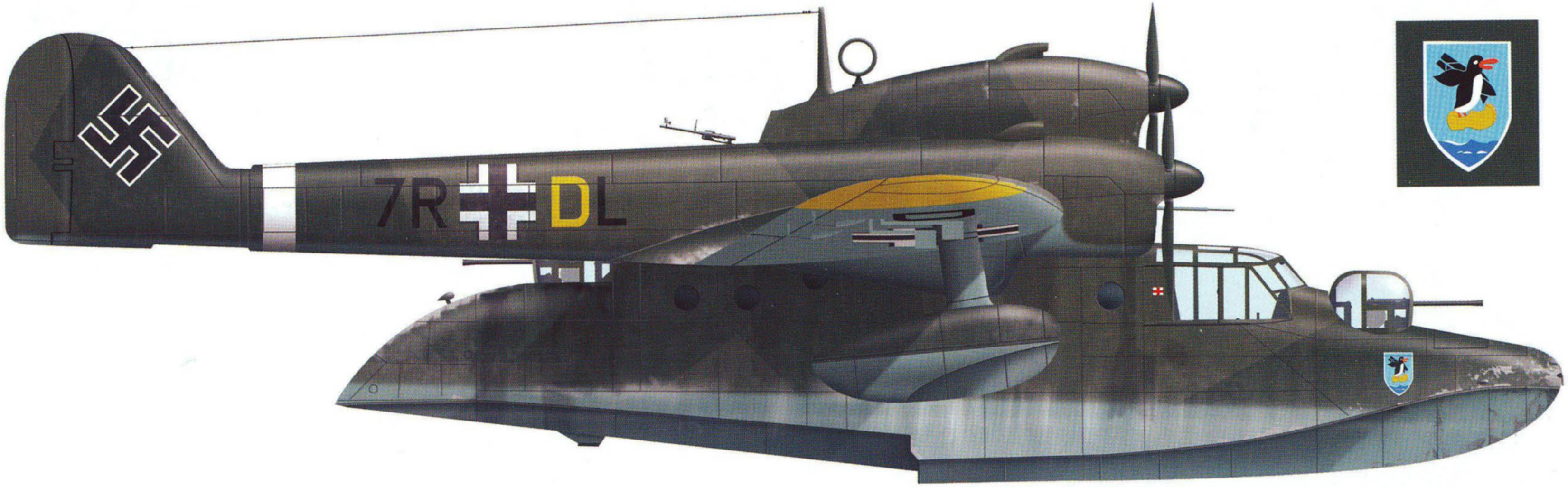
[13] Transport Flight Leader 1.

[14] Flying or Air Corps 4.

[15] Sea Flight Leader Black Sea.

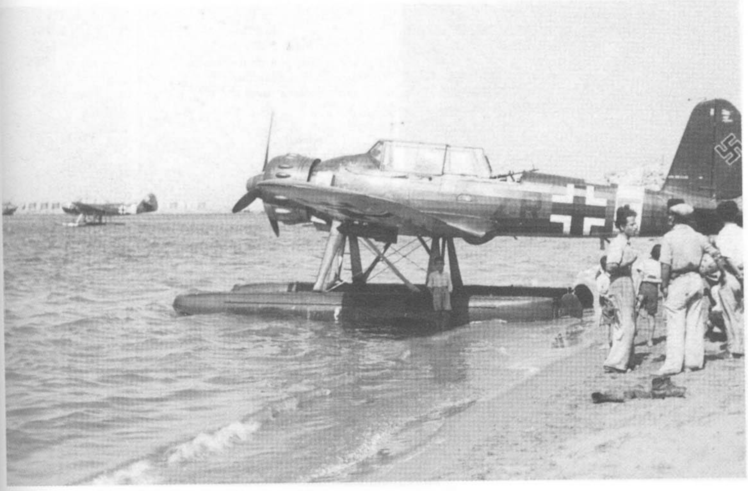
Blohm und Voss Bv 138 C-1 7R+DL of the 3./SAGr.125 is shown here at its moorings at Varna, Bulgaria in the late summer of 1943. Formed from the 3./AufklGr.(See) 125 at Varna in July 1943, in company with the 1.Staffel it carried out operations over the Black Sea under the control of the Aufklärungsführer Schwarzes Meer. In February 1944, the 1. and 3./125 moved to Mamaia, Bulgaria where they remained until August before moving briefly to Thessaloniki in north-eastern Greece prior to transferring to List on the North Sea Island of Sylt; here both Staffeln were disbanded on 5 September.

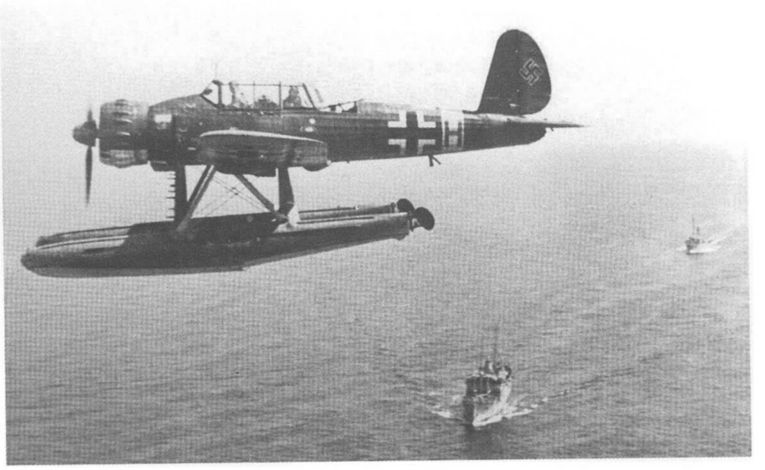




Blohm und Voss Bv 138 C-1, 7R+DL of the 3./SAGr.125

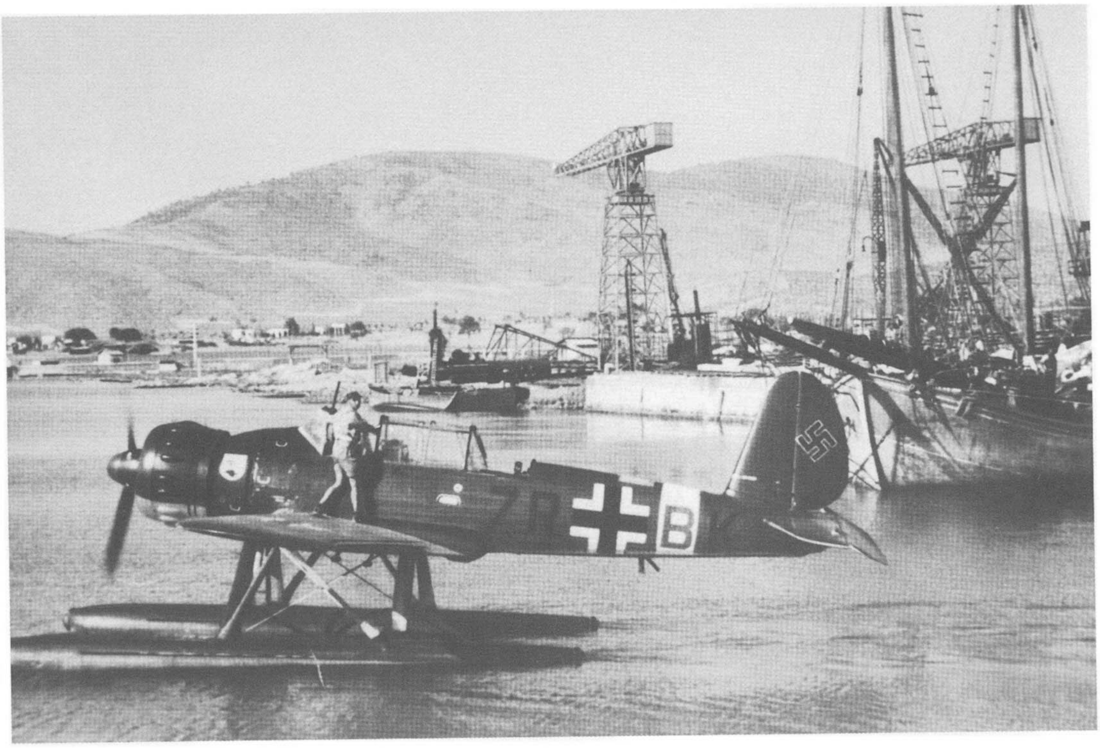
Finished in the standard maritime camouflage of 72/73/65, the aircraft carried a narrow white band around each tail boom immediately ahead of the vertical fin and rudder assemblies. The lower surfaces of each wing tip were painted yellow, as was the individual aircraft letter 'P'. On each side of the bow beneath the turret was the Staffel emblem, which featured a light and dark blue shield containing a yellow-painted clog, which held a penguin carrying a dark-coloured bomb under its right wing.



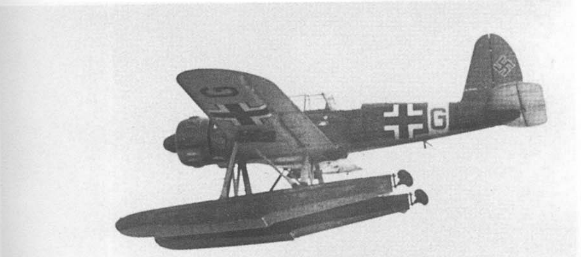


Arado Ar 196 A-3 coded 7R+EK of the 2./AufklGr.(See) 125 sits on the beach near its base at Suda Bay in the summer of 1942. Riding at anchor in the background may be seen one of the Fokker TVIIIs of the 1./AufklGr.(See) 126.

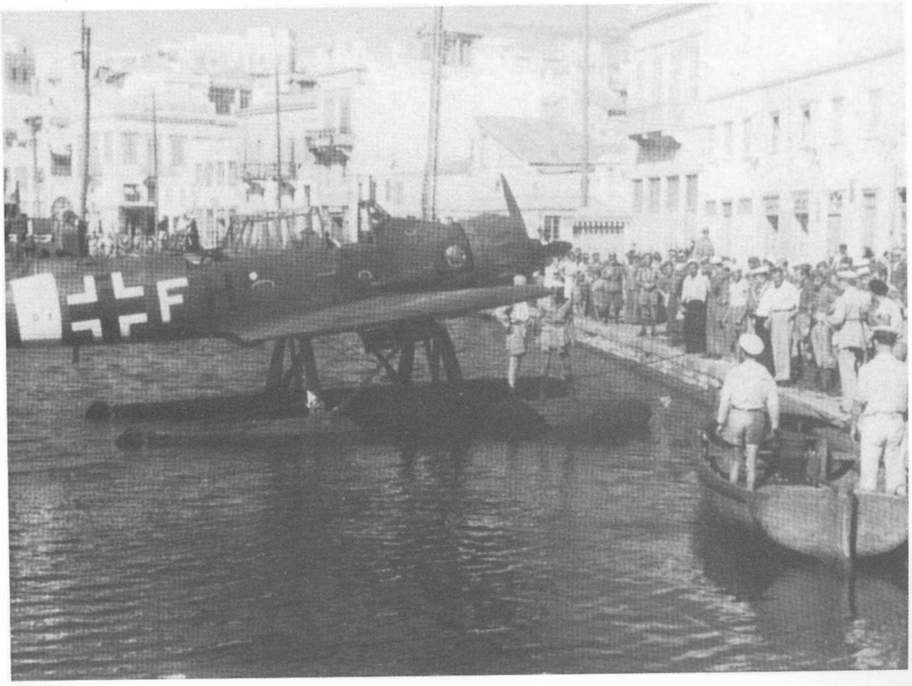
Above: Arado Ar 196 A-3, 7R+HK W.Nr.1960201 of the 2./AufklGr.(See) 125 cruises over an area of the Aegean Sea in company with the Italian torpedo-boat 'Castelfidardo' that would be appropriated by the Kriegsmarine in September 1943. The elderly torpedo-boat was later sunk by Allied aircraft as 'TA16' off Crete on 2 June 1944.



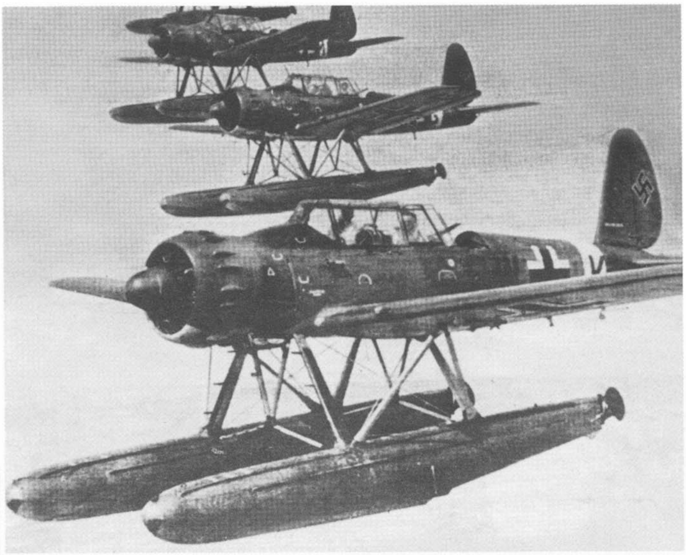
Right: Arado Ar 196 A-3, 7R+BK of the 2./AufklGr.(See) 125 moored at its Suda Bay base in the summer of 1942. The Staffel emblem of a bomb-carrying penguin in a clog was carried on both sides of the forward fuselage immediately aft of the engine cowling.



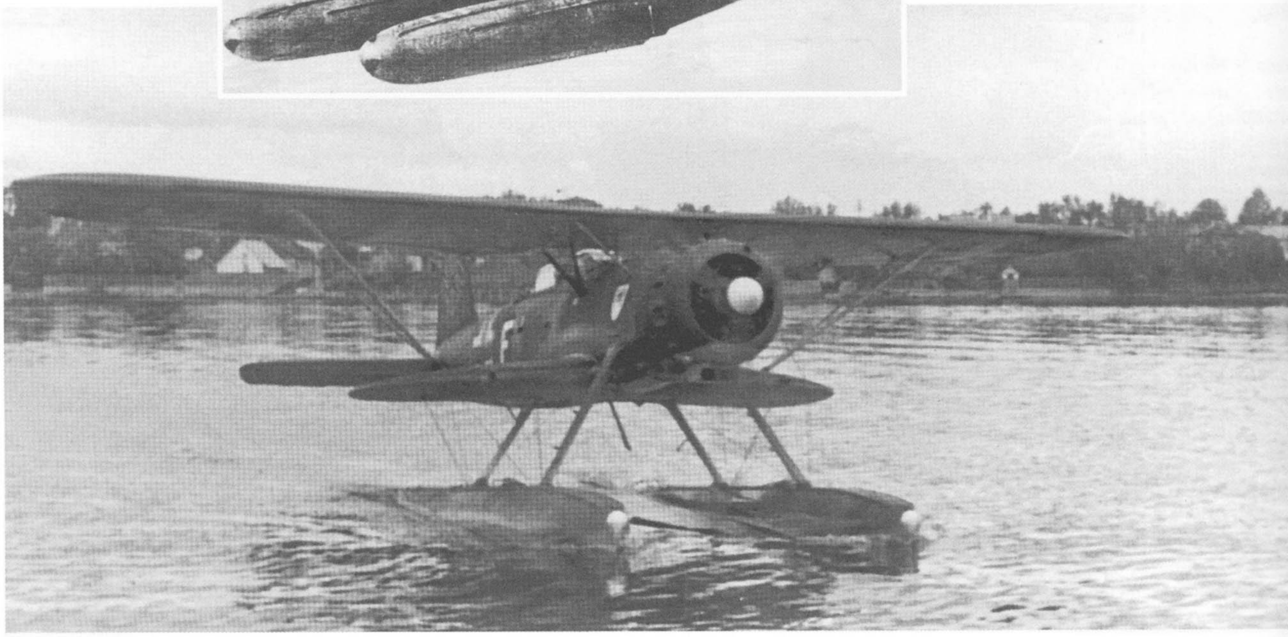
Above: A pair of Arado Ar 196s coded 7R+HK and 7R+GK of the 2./AufklGr.(See) 125 fly in formation over an unidentified area of sea near their base at Suda Bay. In common with other aircraft of the Staffel, their individual aircraft letters are painted in the Staffel colour of red which, on their port sides, contrasts starkly with their white fuselage theatre bands.



Arado Ar 196 A-3, D1+FH of the 1./SAGr.126 seen here moored at the port of Ermoupolis on the island of Syros as Italian troops are disarmed by their former German allies on 15 September 1943.

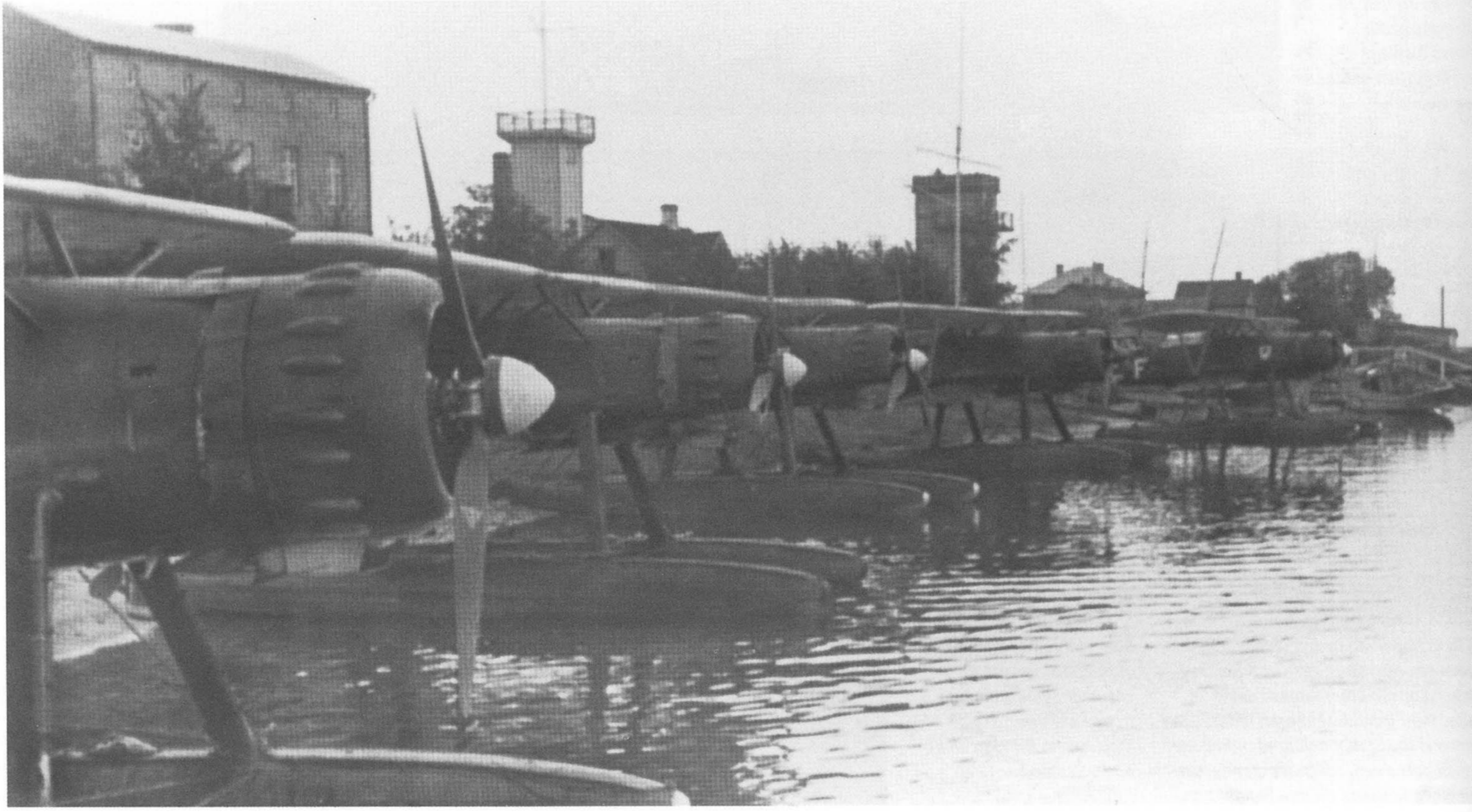


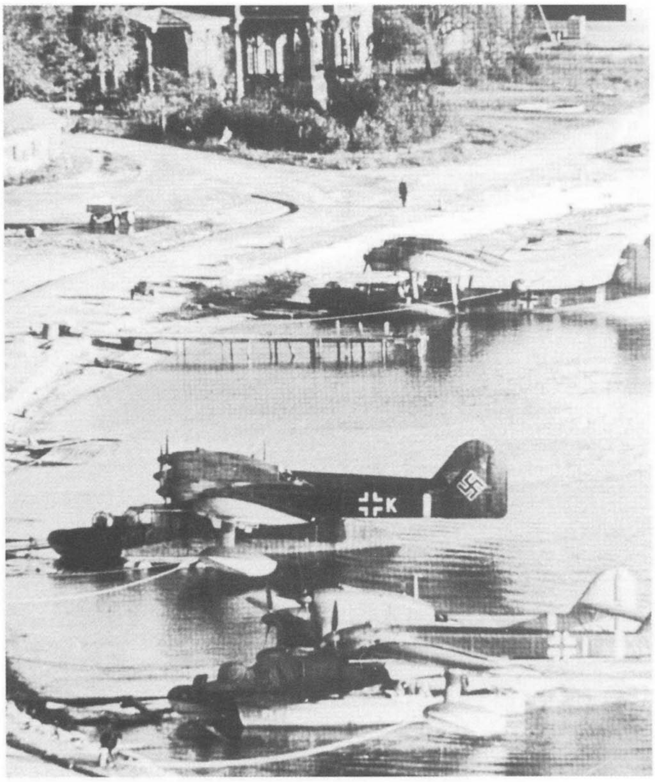
A Schwarm (flight of four aircraft) of Arado Ar 196 A-3s of the 2./SAGr.128 circa 1943 whose 6W Verbandkennzeichen (unit code) may be seen on the closest aircraft.



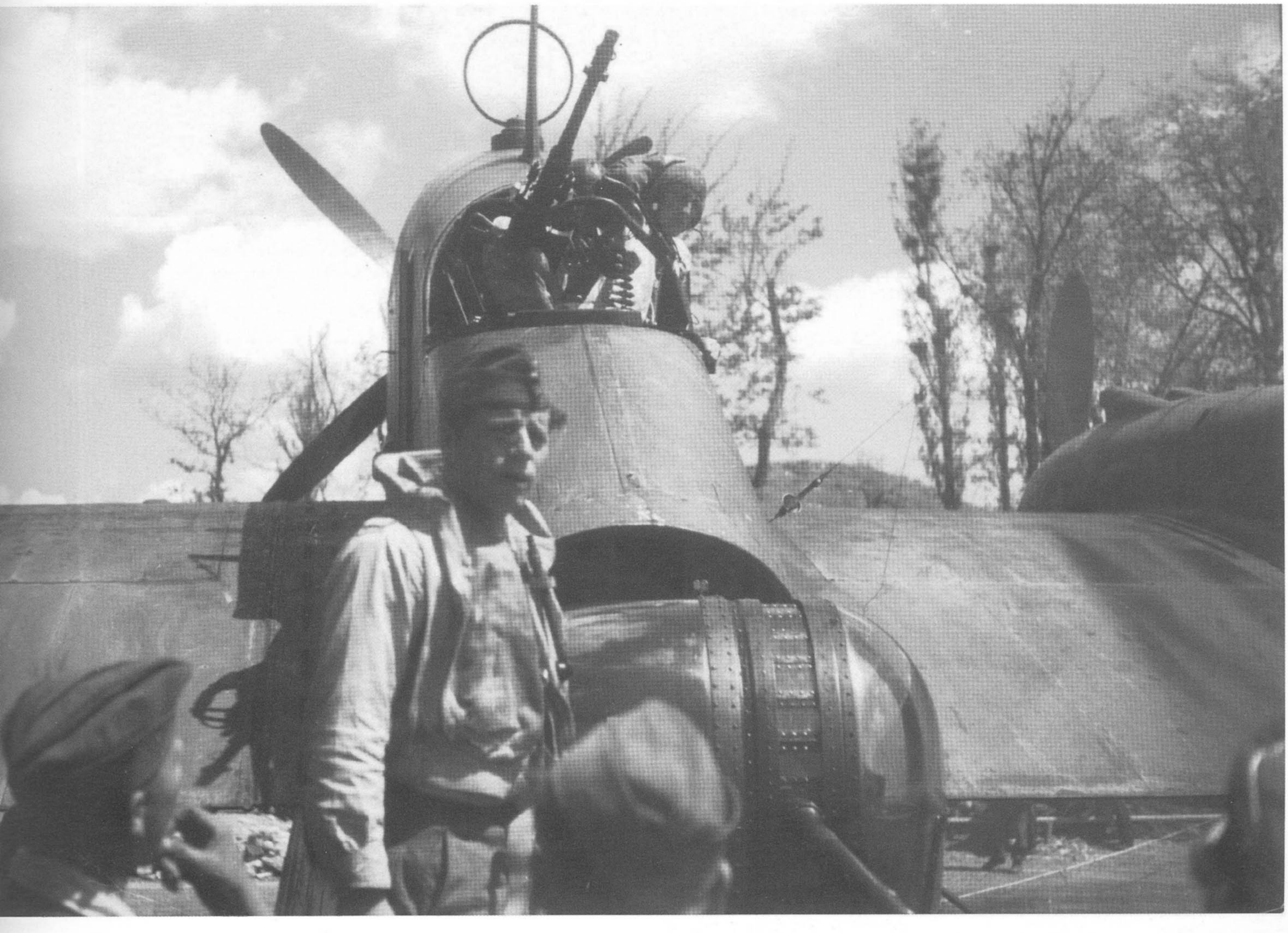
Right: Heinkel He 114 A, 7R+FH taxies towards the camera as it heads for its mooring point after landing at Parnü following a sortie in the late summer of 1941.

Below: Heinkel He 114 As of the 1./Aufklärungsgruppe (See) 125 moored along the quayside at Helsinki while operating under FlFü. Ostsee in the latter months of 1941. From what is visible on the original print it would appear that only 7R+FH, farthest from the camera, carries the Staffel emblem.

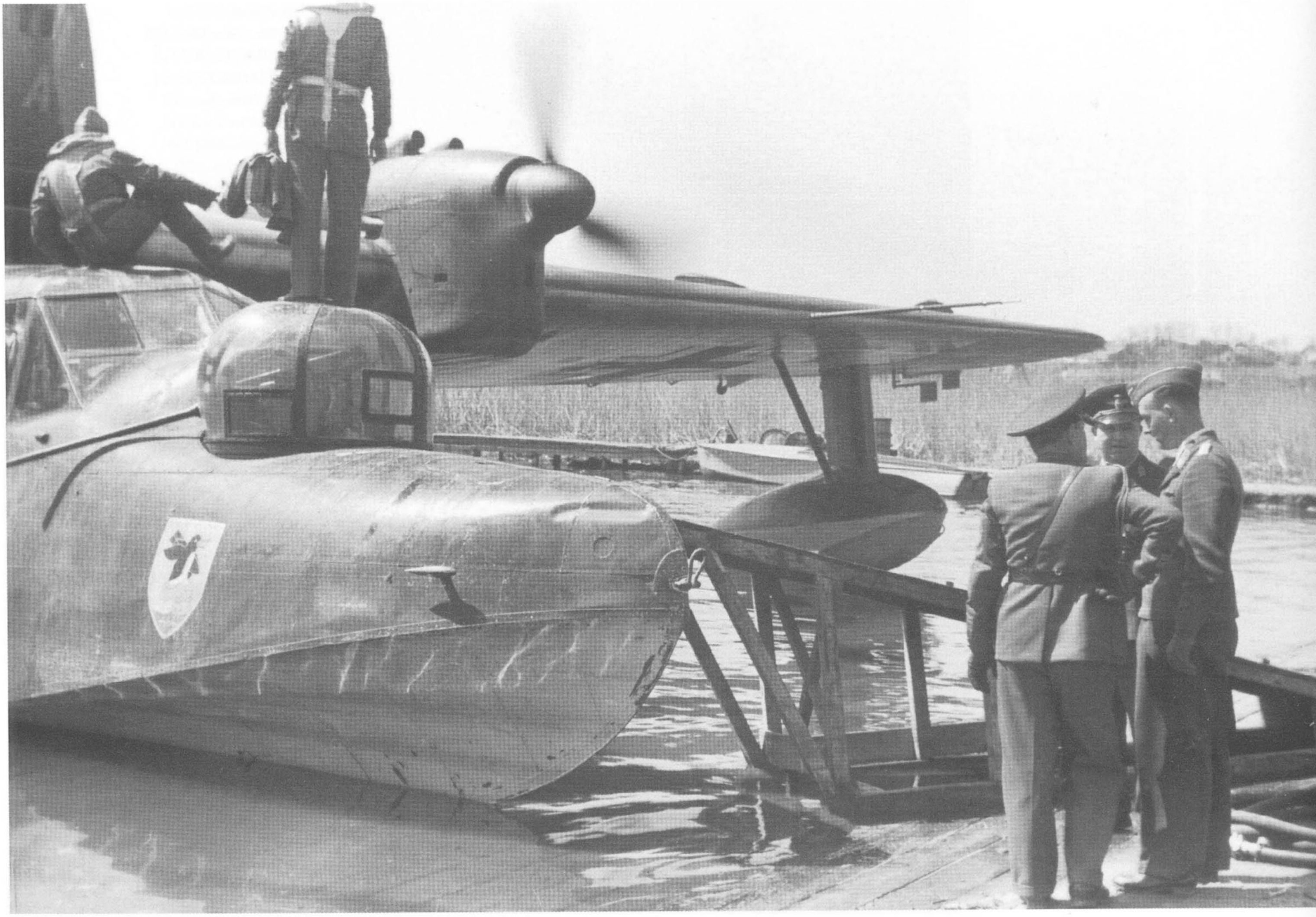




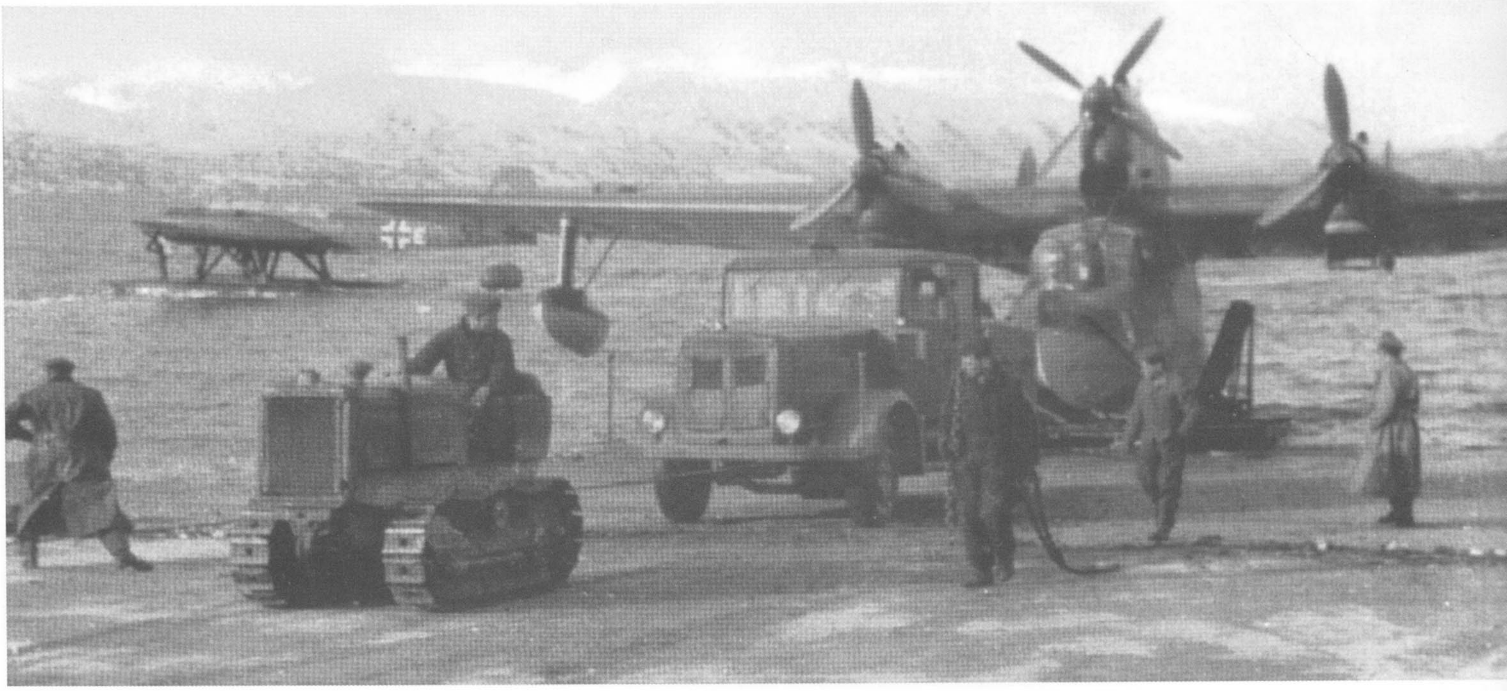
Two Blohm und Voss Bv 138s of the SAGr.125 and a Dornier Do 24 of an unidentified Seenot unit are seen moored at Varna on the Black Sea coast during the late summer of 1943.



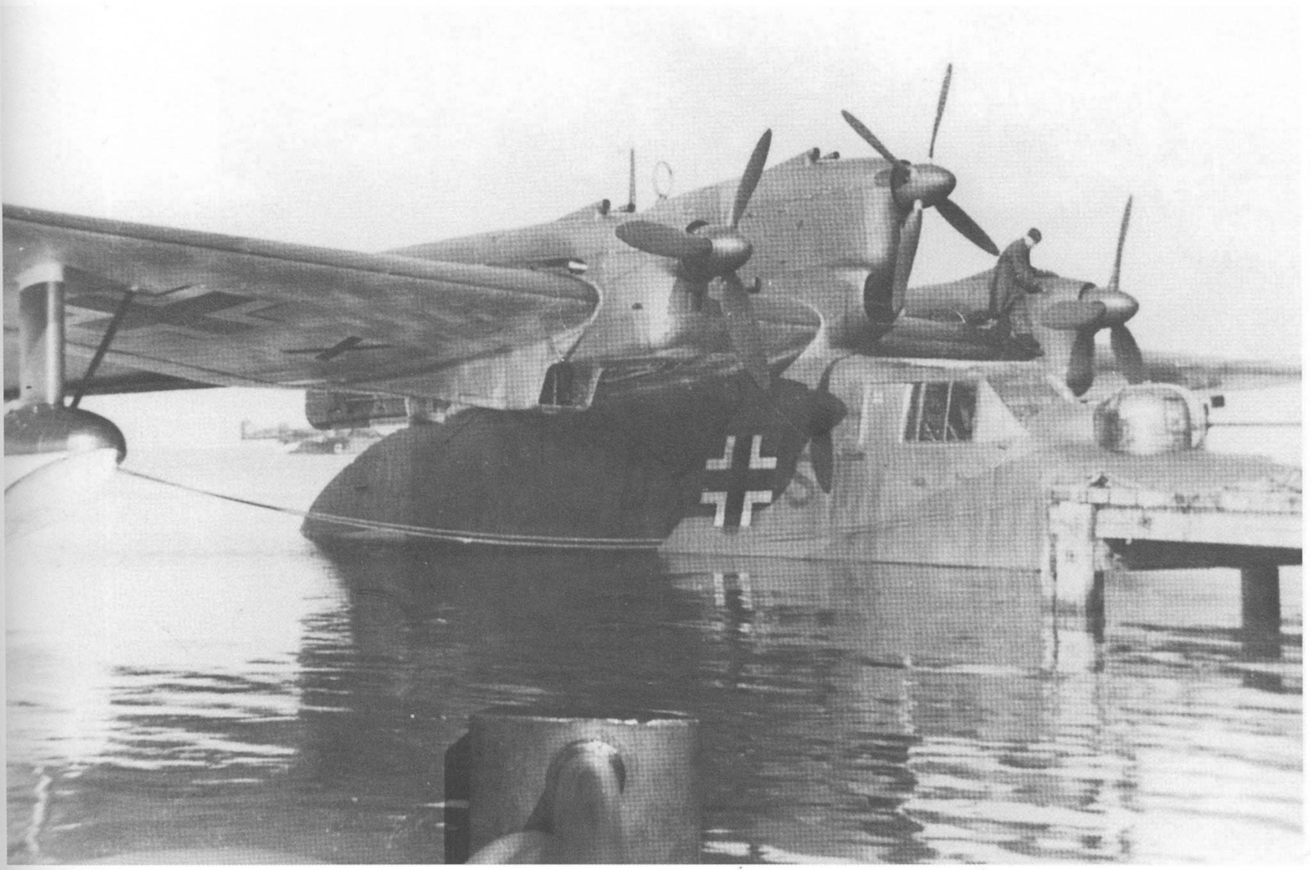
A stern view of a Blohm und Voss Bv 138 C-1 of the 3./SAGr. 125 showing the twin defensive weapons stations, the lower rear turret mounting a single MG 151 20 mm cannon and the upper open station, a 13 mm MG 131 heavy machine gun.



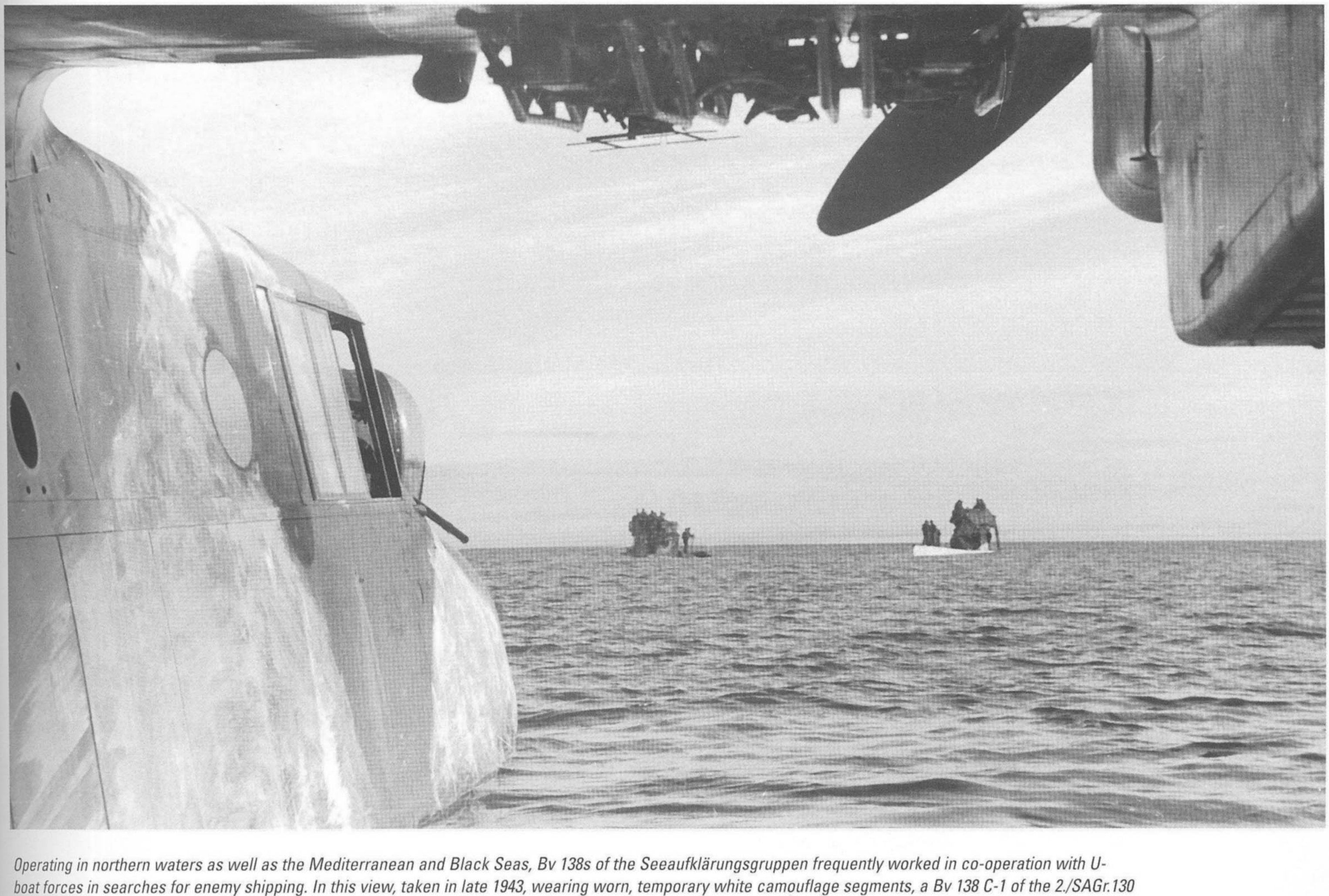
This frontal view of a Blohm und Voss Bv 138 C-1 of the 3./SAGr. 125 at Mamaia on the Black Sea coast gives a clear view of the bow-mounted turret, which, like its twin at the stern, mounts a 20 mm MG 151 cannon. The Bv 138s of the 3./125 would later play an important role in the evacuation of Kerch.



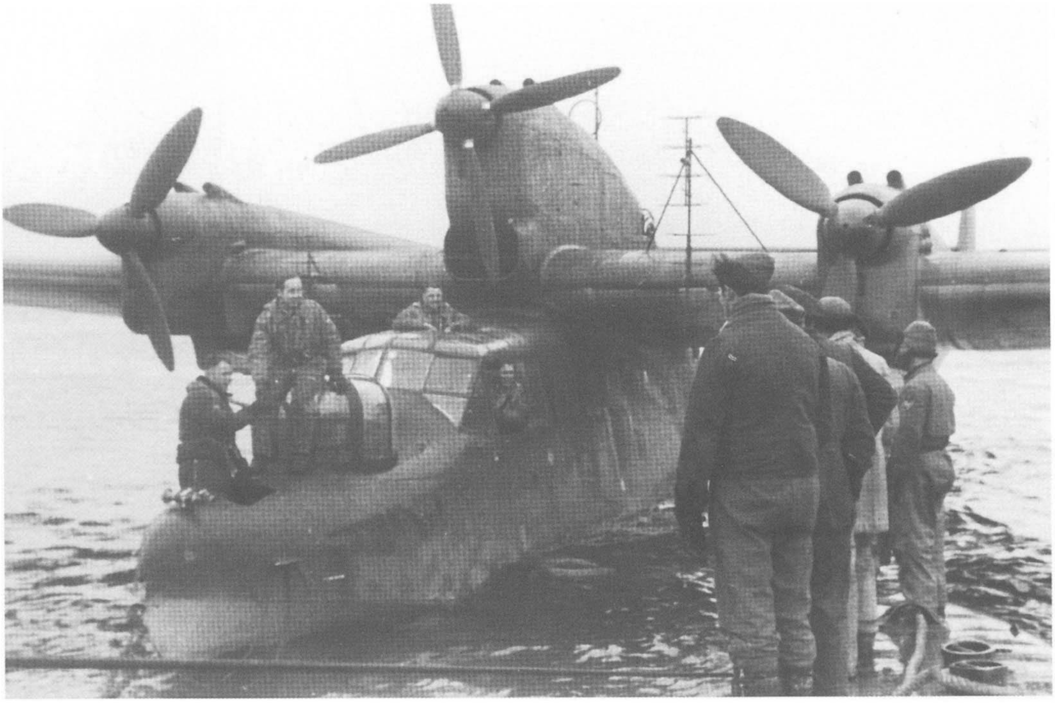
A Blohm und Voss Bv 138 C-1 of the SAGr. 130 is pulled up onto the slipway at the seaplane base of Skattora at Tromsö during the autumn of 1944.



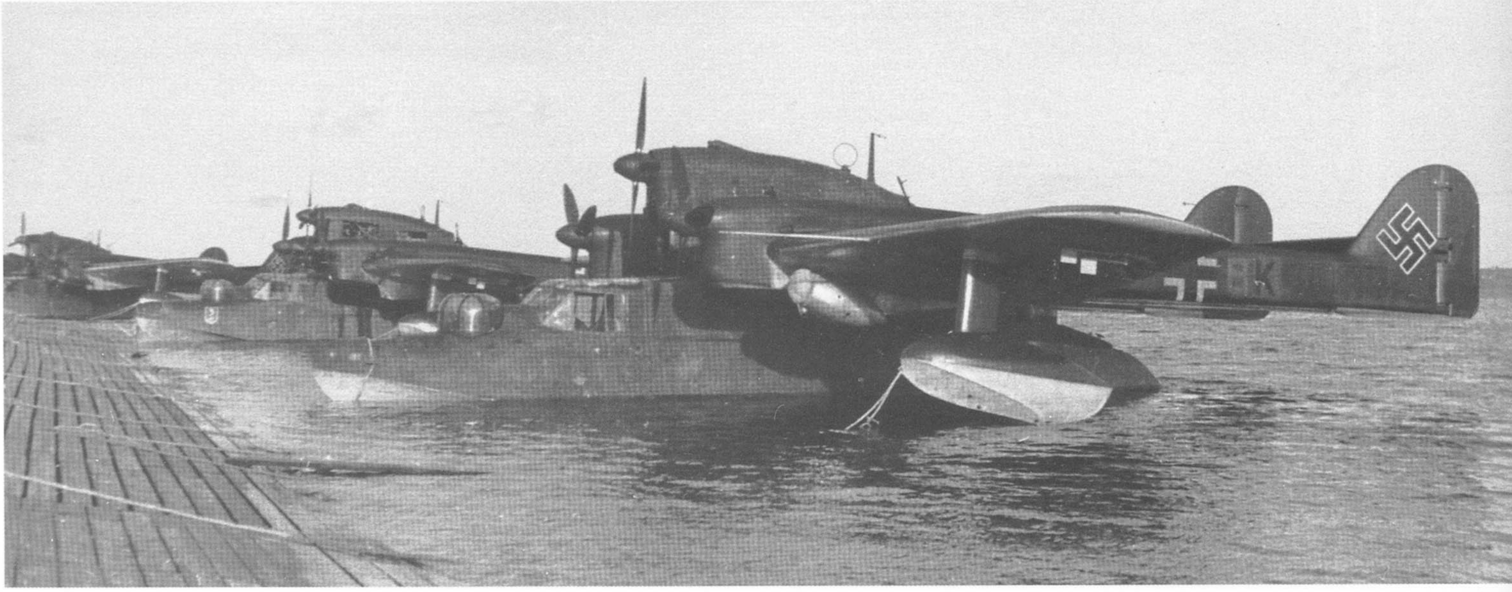
Blohm und Voss Bv 138 C-1, W.Nr.310086, with the Stammkennzeichen of DX+ST photographed while moored at either List or Billefjord between October 1941 and the beginning of 1942. The aircraft is on record as being on the strength of the 1./AufklGr.See 125 in December 1941.

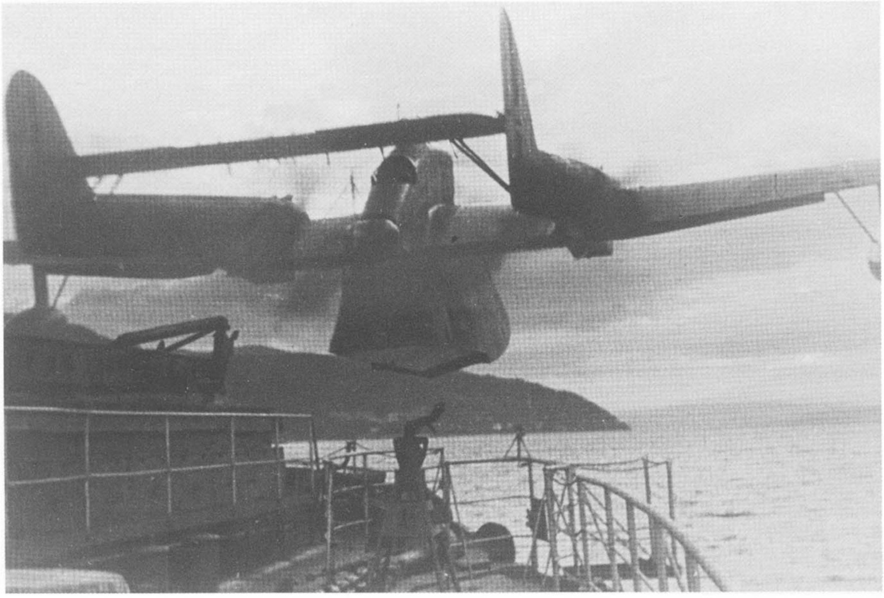


Operating in northern waters as well as the Mediterranean and Black Seas, Bv 138s of the Seeaufklärungsgruppen frequently worked in co-operation with U-boat forces in searches for enemy shipping. In this view, taken in late 1943, wearing worn, temporary white camouflage segments, a Bv 138 C-1 of the 2./SAGr.130 prepares to rendezvous with a pair of partially surfaced U-boats in the Kara Sea.

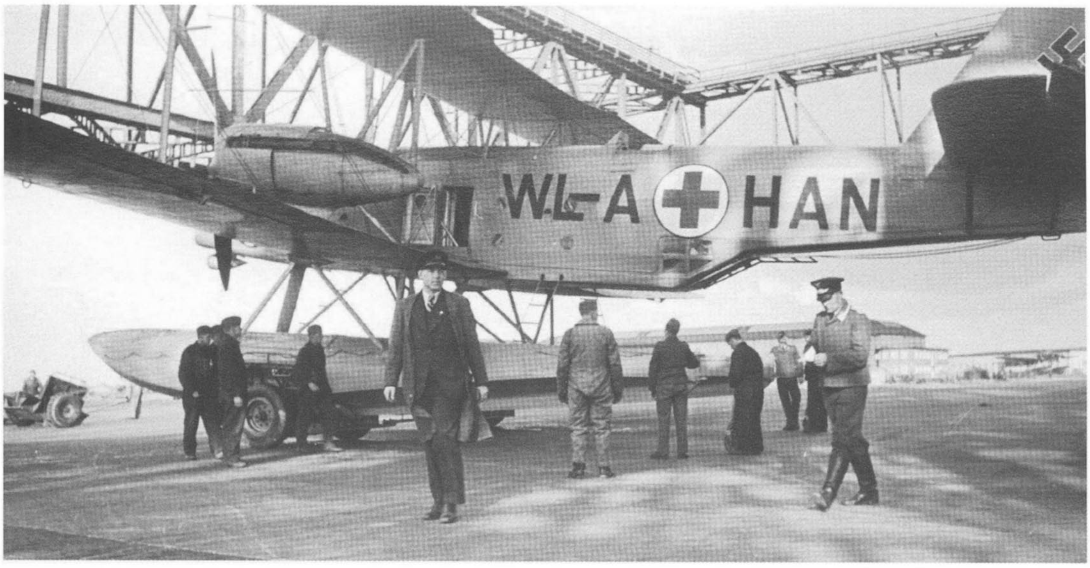


Most likely taken in early 1944, with engines turned off a FuG 200 Hohentweil-equipped Bv 138 C-1 coasts up to a surfaced U-boat from which it will refuel from the small stock of diesel fuel carried by the boat for this purpose.



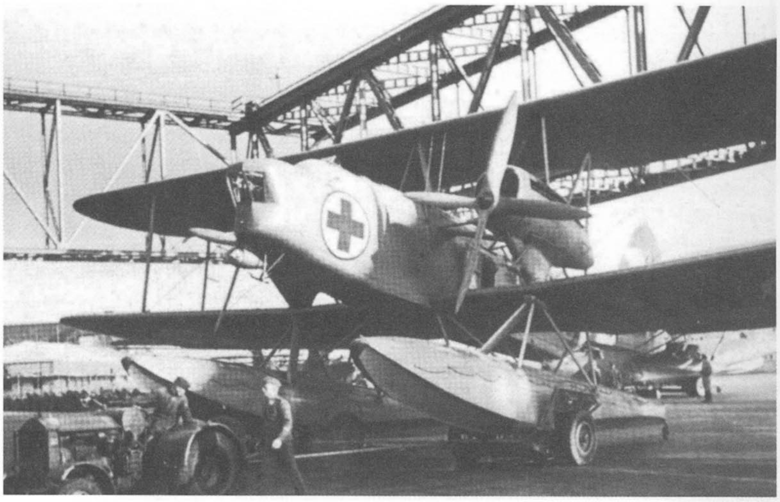


Above and left: As a fully laden Bv 138 could
barely make a safe water take-off when
carrying little more than 3000 litres (660 Imp.Ga
of fuel, the accompanying two photographs
illustrate the methods employed to get a heavi
laden Bv 138 into the air. In the first, one of the
pair of Walther 109-500 rocket-assisting take-o
motors can be seen beneath the wing of the
nearest aircraft. Also employed on other
Luftwaffe aircraft, once used these motors we
jettisoned and returned to earth for re-use, by
parachute in the nose. The photograph of the
138 (left) has been taken at the moment of
launch from a Heinkel-built shipboard catapul
possibly that mounted on either the 'Sperber' a
'Bussard'.



Left and below: Heinkel He 59 B wearing the short-lived Wehrmacht-Luft (Armed Forces - Air) civil markings carried by second-line military aircraft; WL+AHAN served with Seenotstaffel 1 and later received the civil registration of D-AHAN. Finished in an overall grey 02, although carrying the standard swastika tail marking, its fuselage and wing Balkenkreuze have been replaced by proportionately similar red crosses on red-bordered white disc backgrounds.

Seenot



The first recorded aerial rescue may be said to have taken place during the Franco-Prussian War of 1870-71 for it was during the Prussian siege of Paris that the French used observation balloons to airlift 164 wounded soldiers and some important bags of mail to safety from the beleaguered city.

The first three decades of the 20th Century saw several advances made in air rescue services but it was not until 1935 that for Germany a true, dedicated, air-sea rescue service came into being. Prior to that date, if a German airman was forced down over the sea he relied almost entirely on fast motor launches or German or international shipping to rescue him. In the spring of 1935, *Luftkreis-Kommando* VI (See)[1], headquartered at Kiel, assumed the responsibility of developing a system for recovering downed seaplanes and their crews. To this end, a supply officer, *Oberstleutnant* Konrad Goltz, was given the administrative responsibility for a small number of coastal boats to be used in picking up downed airmen. Although none of the boats exceeded a length of 15.25 m (50 ft), he was able to rig the best – an old Air Traffic Control vessel named *Krischen,* with a boom and tackle sufficient for hoisting smaller types of seaplanes aboard.

Shortly after his appointment, Goltz issued regulations that provided for six rescue zones: two in the North Sea and four in the Baltic. A rescue boat was assigned to each zone and authority was given to each zone commander to request the use of aircraft for search and rescue purposes from the Naval Headquarters at Kiel and Wilhelmshaven. Obviously, wherever possible, the German lifeboat society also rendered aid and although the system was rather limited, it was sufficient for what little air traffic operated over water during the period between 1935 and 1938.

One major difficulty facing early air-sea rescue operations was that of communication between the rescue services and downed airmen. Initially, for long-distance and over-water flights, a crude form of emergency radio was sometimes provided but it was found that their dry batteries were often unreliable. Although poor communications would continue to plague early wartime rescue flights, it would not be until 1941 that a specially designed emergency transmitter which would greatly improve these communications entered production. Designed and produced by the firm of Fieseke & Höpfner, it was small, buoyant, and waterproof and powered by an internally-mounted hand-driven generator. Its use would greatly increase the chances of rescue for aircrew downed in the sea.

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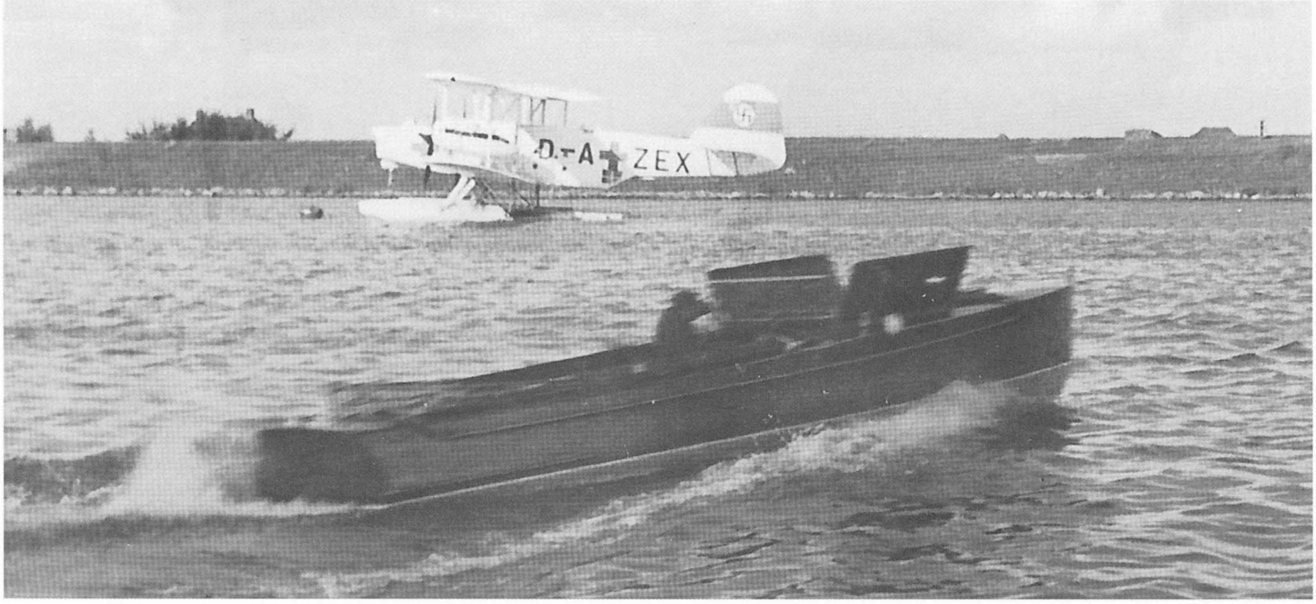
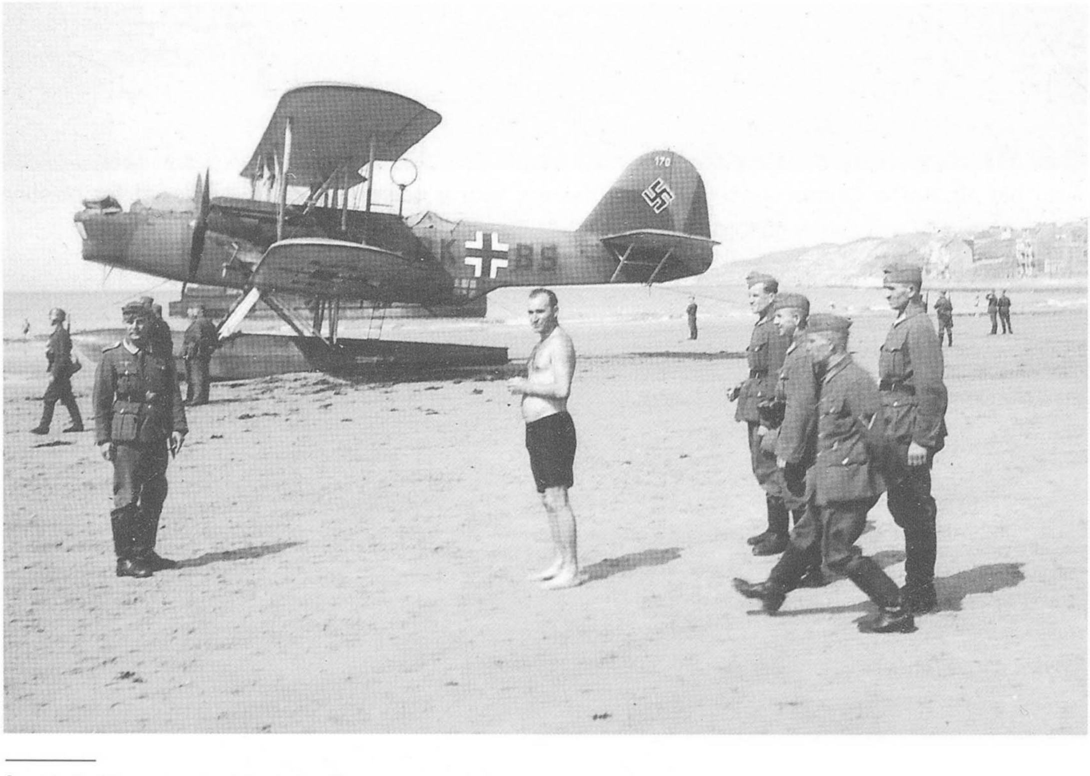
[1] Air Regional Command VI, Sea. First formed on 1 April 1934, on 12 October 1937 it was renamed Luftkreis-Kommando 6 and on 4 February 1938 became Luftwaffenkommando See.



Taken very early in the war, D-AZEX was a Heinkel He 59 which had been fully converted to the air-sea rescue role by the company of Walther Bachmann & Ribnitz. The first time this aircraft appears in German records is with SNSt.2 at List on 17 April 1940. On 31 May 1940, it was detached to Stavanger, Norway and returned to List on 23 June. It was then detached to Amsterdam-Schellingwoude from 18 July 1940 until 5 August 1940 when it was returned to Norderney for float repairs before returning to Amsterdam the following day. It was last recorded as D-AZEX at List on 31 August 1940 after which its subsequent history is unknown.

In response to the increased likelihood of a European war at the time of the 1938 Munich Crisis, during the early months of 1939 the *Luftwaffe* began to conduct exercises that included its first large-scale, over-water operations. Up until that time, there had been only a few instances of airmen in distress at sea and in such cases, rescue units involved had used any available naval seaplanes to assist in recovery efforts. However, it was not until after these regular over-water operations began that the decision was made to acquire a specifically modified seaplane for air-sea rescue duties. For this, Gotz selected the Heinkel He 59.

Having acquired fourteen of these aircraft, Gotz sent them to the company of Walter, Bachman, and Ribnitz in Mecklenburg for refitting the machines to specifications issued by the *Luftwaffen-inspektion des Sanitätswesens*[2]. Accordingly, each aircraft was equipped with first-aid equipment, electrically heated sleeping bags and artificial respiration equipment. Additionally, each aircraft was fitted with a floor hatch and a collapsible ladder long enough to reach down to the surface of the water, a hoist, and lockers to hold lifebelts, signalling devices and other survival equipment. The first aircraft to undergo these modifications was He 59 C-2, W.Nr.1889, D-AROO, which was sent to undergo a series of trials at the *E-Stelle* at Travemünde in April 1939 and later served with *SNFlKdo*.3.



Left and opposite pag Originally having served at Parow with Fliegerwaffenschule (See) 1, these two views show Heinkel He 59, DK+BS, W.Nr.2584, shortly aft being transferred to SNSt.9. It was damaged in an encounter with Sovie fighters near Turku, Finland on 23 July 194 While having no relationship to the aircraft W.Nr. it is thought that the 170 o the fin may have bee associated with its previous service at Parow.

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[2] Medical Inspectorate of the *Luftwaffe*.

Seenotstaffeln and *Seenotflugkommando*

***SNSt.*1** Formed 1 June 1939 in Norderney and List. Disbanded in June 1940, it re-formed at Brest as *Seenotflugkommando* 1 between June and November that same year. On 19 August 1944, it was redesignated as *Seenotstaffel* 60.

***SNSt.*2** Formed on 26 August 1939 in Pillau. Disbanded in June 1940, it was re-formed as *Seenotflugkommando* 2 at Cherbourg between June and November 1940. It was redesignated as *Seenotstaffel 81* on 19 August 1944.

***SNSt.*3** Formed at Boulogne in June 1940, between the date of formation and November 1940 it was redesignated as *Seenotflugkommando* 3. It was withdrawn to Germany during August 1944 and disbanded shortly thereafter.

***SNSt.*4** Formed in June 1940 at Wilhelmshaven; between its formation date and November 1940 it was redesignated as *Seenotflugkommando* 4. On 19 August 1944, it was redesignated as *Seenotstaffel* 80.

***SNSt.*5** Formed at List in June 1940, between its date of formation and November it was redesignated as *Seenotflugkommando* 5. It was redesignated as *Seenotstaffel* 51 on 19 August 1944.

***SNSt.*6** Formed in Syracuse/Augusta in March 1941, the *Staffel* was disbanded on 19 August 1944.

***SNSt.*7** Formed at Kiel-Holtenau in March 1941, the *Staffel* was redesignated as *Seenotstaffel* 70 on 19 August 1944.

***SNSt.*8** Formed at Mamaia in April 1941; in October 1944, it was to have become *Seenotstaffel* 40 but was disbanded that September.

***SNSt.*9** Formed at Kiel-Holtenau in April 1941 from the *Ergänzungs-Seenotstaffel,* it was disbanded in September 1944.

***SNSt.*10** Formed at Tromsö in August 1942, it was redesignated as *Seenotstaffel* 50 on 19 August 1944.

Erg.SNSt. Formed in Kiel-Holtenau during August 1939, it was redesignated as *Seenotstaffel 9* in April 1941.

The first designation for the new, dedicated air-sea rescue units was *Seenotstaffel*[3], followed by a sequential Arabic number to identify the specific unit. Beginning in June 1940, this designation began to change to *Seenotflugkommando*[4], but the original unit number designation was retained. The *Seenotstaffel* title would later be reinstated with the creation of the *Seenotstaffeln* 7, 8, 9 and 10 between April 1941 and August 1942 and again during further reorganisation during 1944.

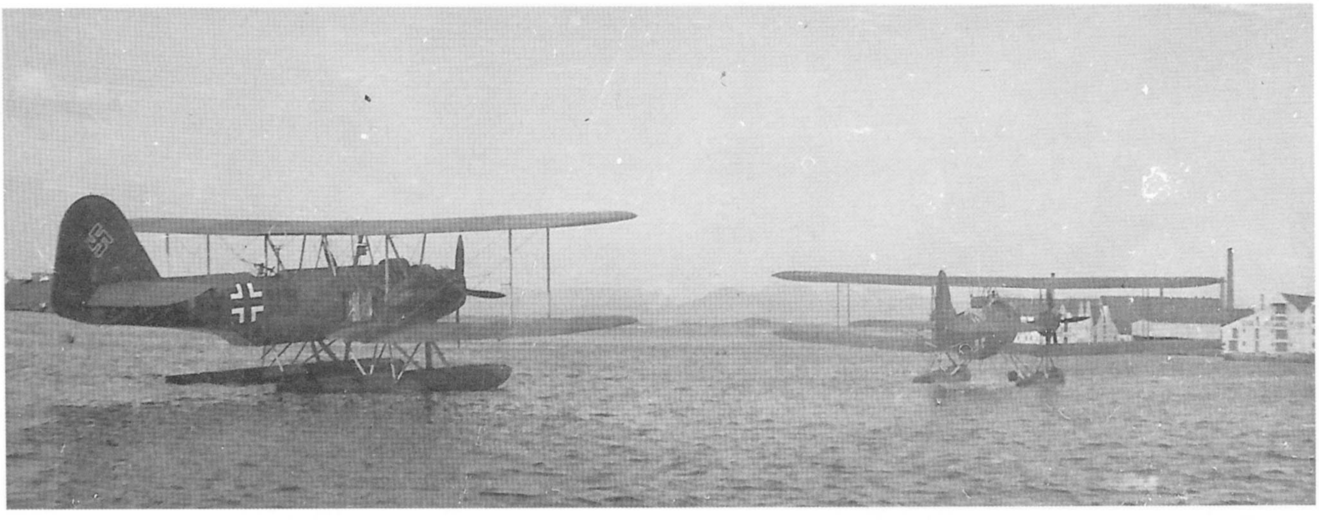
In the meantime, however, the continued growth of the *Luftwaffe* and its reorientation towards a much larger sphere of operations and increased areas of operational activity had earlier prompted a large-scale reorganization of its command structure. The most important took place during February and March 1939 with the introduction of four operational commands termed *Luftflotten*[5] and headquartered respectively in Berlin, Brunswick, Munich, and Vienna. This reorganization saw the air-sea rescue services placed under the *General der Luftwaffe beim Oberbefehlshaber der (Kriegs) Marine*[6].

During the campaign in Poland, neither *SNSt.*1 nor 2 witnessed much activity; however, this was to change on 18 December 1939. On that date, 24 Vickers Wellington bombers of RAF Bomber Command took off for a raid against enemy shipping in the approaches to Wilhelmshaven. Of this force, 22 aircraft reached the target area where they attacked shipping but were themselves attacked by a mixed force of Bf 109 and Bf 110 fighters, which accounted for twelve of the Wellingtons. The *Seenotstaffeln* responded with both boats and aircraft and saved a score of British airmen in this, the first wartime air-sea rescue operation of any appreciable size.

During the winter of 1939 - 1940, appreciable lengths of the northern German coastline froze over and presented operating difficulties for many maritime air units and most were stood down from operations. This weather-induced hiatus also affected the *Seenotdienst*[7]. On a temporary basis, therefore, two Junkers Ju 52 *Sanitätsflugzeuge*[8], and later a third, were subordinated to the Norderney-based *SNSt.*1. The first two, registered D-TABY and D-TABX, were assigned towards the end of December 1939, while the third, D-TABW, did not join the *Seenotdienst* until the end of January 1940. At this time, this was the only unit involved in operations with such aircraft.

These aircraft also ferried supplies to outlying islands and between 9 January and 22 February, airlifted a total of 109 tons (98.8 metric tons) and 1284 people in 214 sorties for a total of 24:36 flight hours. As winter and the ice receded and the weather began to improve, the Ju 52s were handed over to other units as the seaplanes began to resume their normal rescue duties.

On 9 April 1940, Germany launched its invasion of Norway and Denmark. As *Generaloberst* Hans Jeschonnek had only revealed the details of the attack to a handful of staff officers, the *Seenot* service was unaware of the details and consequently unprepared for large-scale rescue operations should the need arise. On the first day of operations, a number of Ju 52 transports crashed into the Norwegian Sea but there were no rescue forces available to save their marooned crews. Upon learning of the invasion, Goltz immediately ordered several He 59 seaplanes to transfer from the island of Sylt to



Two He 59s moored at Stavanger during the latter half of 1940. No longer finished in their overall white ambulance scheme, both aircraft wear the standard 72/73/65 camouflage for maritime aircraft.

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[3] Air-Sea Rescue Squadron.

[4] Air-Sea Rescue Detachment abbr. *SNFlKdo*.

[5] Air Fleets. Later increased to a total of eight through the creation of *Luftflotten* 5, 6, 10 and Reich.

[6] *Luftwaffe* General on staff to the Navy High Command.

[7] Air-sea rescue service.

[8] Medical aircraft.

Aalborg in northern Denmark so that within two days of the beginning of the invasion, rescue aircraft and boats could begin operating in support of the invading forces.

As bases were captured along the Norwegian coastline, rescue aircraft and boats moved northwards from Listafjord to Stavanger, Bergen, and Trondheim and later, with the fall of central and Northern Norway, bases at both Tromsö and Kirkenes were used to service rescue needs in the far north. As the fighting in Norway drew to its close, the General Staff began assessing the performance of the *Luftwaffe*. Ordered to Berlin, Goltz presented a detailed list of complaints and recommendations to Jeschonnek, which resulted in the establishment of *Der Inspektion des Seenotdienstes*[9], with Goltz appointed as Chief of the Inspectorate and promoted to the rank of *Generalmajor.*

Elements of the air-sea rescue service remained in Norway throughout the war and later provided valuable rescue services along the bitterly contested Arctic sea lanes to and from Russia. However, despite the lessons learned in Norway, the General Staff would again fail to pre-position search and rescue forces prior to *Luftwaffe* operations in the May 1940 German invasion of France and the Low Countries. While the greater weight of air operations was concentrated on eliminating the French Air Force, the *Luftwaffe* had a secondary mission of keeping the English Channel under observation and attacking British ships bringing reinforcements to the Continent. Despite the need to maintain continuous air-sea rescue operations, throughout May the rescue service had to depend on interim solutions such as the deployment of small detachments and the use of aircraft of the *Küstenfliegerstaffeln* while trying to expand to meet the needs of possible future aerial confrontations over the North Sea and English Channel. In a move to stabilise the situation, Goltz prevailed on *Generalmajor* Hans-Georg von Seidel, *Generalquartiermeister der Luftwaffe*[10], to arrange for the transfer of a further 12 He 59s, which, after conversion, began joining the rescue services late in July.

Although sorties were flown over the North Sea and English Channel before the fall of France, air-sea rescue units did not move into the country until after the armistice was signed. In late June, Goltz toured the French and Belgian coasts and decided to establish three centres for air-sea rescue, selecting Boulogne for northern Channel rescue operations, Cherbourg for the south and Brest for the Atlantic. In Holland, an Air-Sea Rescue Service Centre was attached to the Naval Command at The Hague and a base established at Schellingwoude to monitor North Sea activities. This latter detachment had initially transferred there on 23 May and, during July, it again transferred to Boulogne where it was renamed as *SNFlKdo 3.* During November 1940, this identity was again changed, this time to *SNSt*.3. Throughout this period, it was responsible for the coast of Belgium and the eastern region of France. These operations were to be supplemented by *SNFlKdo 2,* based at Cherbourg and responsible for the central part of the English Channel, while *SNFlKdo 1,* based at Brest, served the Atlantic.

Initially, two He 59s and two rescue boats were assigned to each of these bases, but to augment these Goltz acquired and jury-rigged several French seaplanes, which he put into service for rescue duties. Additionally two three-engine Breguet-Bizerte seaplanes were found on a lake near Bordeaux which Goltz pressed into service, while, following the armistice, the government of Vichy France provided him with a further six Breguet aircraft. Once converted, these aircraft flew operationally from Brest or Boulogne.

Since even the Bf 109 and the Bf 110 fighters carried inflatable rubber dinghies, it was preferable for their crews to ditch rather than bale out over the water. Both types usually floated for up to 60 seconds after first touching the water which allowed their aircrew, if uninjured, to unstrap, scramble out of the aircraft, inflate their collapsible dinghy, and clear the aircraft – at least in theory. British fighter pilots were not so fortunate. For example, the Hurricane had a nasty tendency to nose over when ditching, flipping onto its back and trapping the pilot under water as the large radiator beneath the wing acted as a water scoop, while its contemporary – the Spitfire – was only marginally better. Thus, the majority of British pilots preferred to bale out rather than attempt a ditching, relying only on their *Mae West* life jackets to keep them afloat.

Up until July 1940, German air-sea rescue operations were straightforward. However, as it became increasingly apparent to the British that these rescue aircraft were also operating clandestinely in a reconnaissance role and not strictly limiting themselves to purely humanitarian operations, the RAF was later directed to engage and destroy these aircraft.

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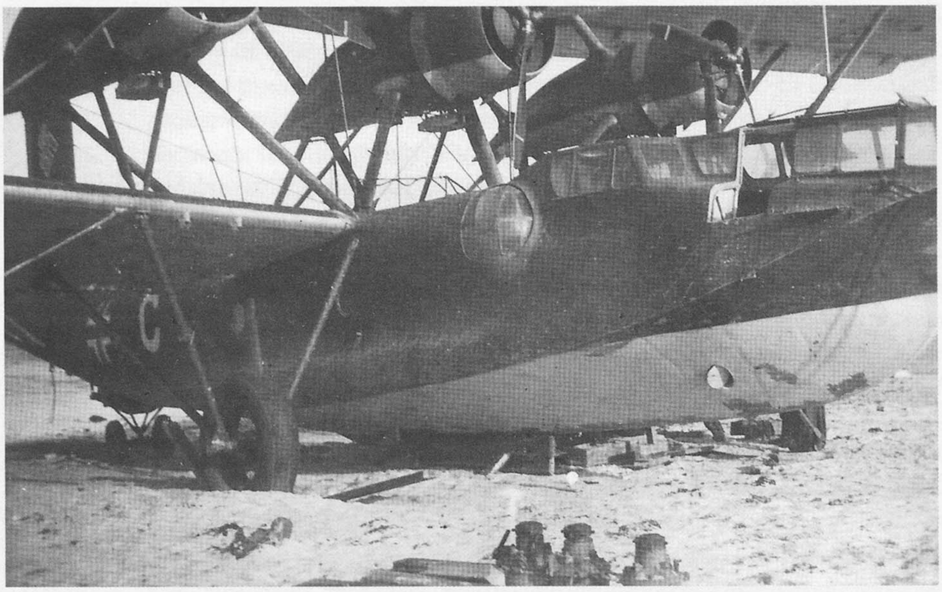
[9] Inspectorate of Air-Sea Rescue Services.

[10] *Luftwaffe* Quartermaster General.

Breguet Bizerte 521 in German Service

In Wiesbaden on 26 July 1940, the German armistice commission asked the French delegation if they had any French aircraft for sale for non-military use. The French Admiralty responded on 27 July that they did and in a letter dated 30 July, it was noted that eight *'Bizerte'* seaplanes were available with four in France and four in Karouba, Tunisia. On the same day, a German float-equipped Ju 52 landed with two complete crews (headed by *Lt.* Klingspohr and *Lt.* Unterhorst) in Hourtin, where they captured the *Bizerte* W.Nr. 11 and 34. The French had left these aircraft as they were unserviceable due to technical failures and a lack of spare parts. However, French mechanics soon repaired the aircraft, whereupon they received German markings and on 7 August were flown to Brest-Poulmic. These were the only captured *Bizerte* aircraft that had seen service with the French prior to the aircraft's introduction into German service. W.Nr. 35, 36 and 37, found at Le Havre, were similarly captured and put into service by the Germans, but the French forces had never used them officially.

On 9 August 1940 four *'Bizerte'* arrived in Berre having flown from Karouba. On 12 August 1940 German engineers inspected the *'Bizerte'* W.Nr. 4, 6, 7, 23, 24, 26, 27 and 29 and together with French pilots they air-tested four machines – the aircraft still retaining their French markings. This was due primarily to the fact that the French insisted that the aircraft were not to operate until the Germans paid for them. Although the aircraft were worth only 25 million Francs, the Germans ended up paying almost double that for the aircraft - 43,240,000 Francs. The transaction was finally completed on 15 August 1940 and two days later, on 17 August, W.Nr. 6, 7, 26 and 27 were flown to Brest-Poulmic. They were followed on the nineteenth by W.Nr. 4, 24 and 29. On 21 August, a further aircraft, W.Nr.23, was flown in. Although the French had a total of 19 *Bizerte*, the Germans never insisted on acquiring all of them. Instead, only eight were originally gained. The aircraft were predominantly operated by the 1. and 3. *Seenotflugkommando*.



A poor quality partial view of one of the French Breguet Bizerte 521 flying boats pressed into Seenot service following the fall of France. Developed from the British Short Calcutta flying boat, the prototype flew for the first time on 11 September 1933 with series production aircraft mainly differing from the prototype by having a long narrow glasshouse extension from the pilot's cockpit to the bow. Powered by three 671kW (900 hp) Gnome-Rhône 14 KRS radial engines it had a top speed of 243 km/h (151 mph), a maximum range, depending on payload, of between 2000 and 3000 km (1243 to 1864 miles) and a service ceiling of 6600 m (21650 ft).

The first instance of an air-sea rescue He 59 coming under attack occurred during the early morning of 1 July 1940 when three Spitfires of 72 Sqn forced down D-ASAM of *SNFlKdo* 3 eight miles off Sunderland. Airborne to investigate reports of an enemy aircraft operating suspiciously in the vicinity of a convoy, the fighters identified it as an enemy floatplane which they subsequently attacked, despite it being clearly marked as an air ambulance and thus likely marking the first British attack on an aircraft clearly marked with the Red Cross[11]. With its crew taken into captivity by the Royal Navy, the aircraft was subsequently towed ashore for examination.

Just over one week later on the evening of 9 July, a second Heinkel He 59 B-2, D-ASUO, this time from *SNFlKdo 1,* was forced down on to the Goodwin Sands by Spitfires of 54 Squadron. Apart from a broken feeder pipe, the Heinkel was undamaged and, after the capture of the aircraft and its crew, it was towed into Ramsgate by the Walmer lifeboat. Subsequent examination of the documents carried by this aircraft found that entries in the pilot's log noted positions and movements of British convoys and other shipping. With reconnaissance clearly being a military and not a humanitarian function, the British decided to take action against such activities and accordingly, on 29 July, the Air Ministry released Order No. 1254, which stated that:

'*It has come to the notice of His Majesty's Government in the United Kingdom that enemy aircraft*

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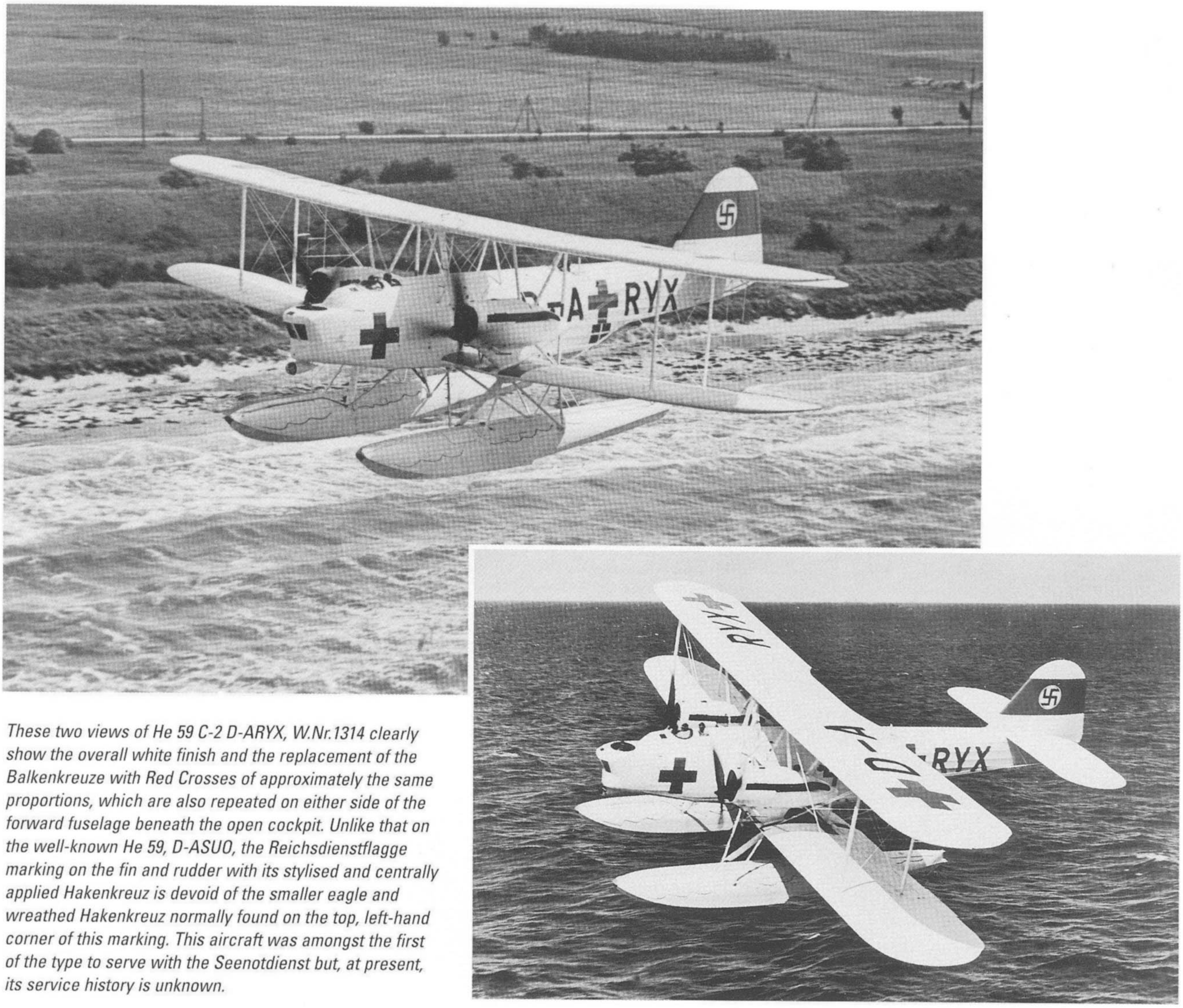
[11] Although intercepted near a British convoy, this particular aircraft had been involved in a genuine rescue mission and was searching for the crew of He 115, M2+CL of the 3./*KFlGr.*106 which had force-landed in the North Sea due to engine failure during a mine-laying sortie.



These two views of He 59 C-2 D-ARYX, W.Nr.1314 clearly show the overall white finish and the replacement of the Balkenkreuze with Red Crosses of approximately the same proportions, which are also repeated on either side of the forward fuselage beneath the open cockpit. Unlike that on the well-known He 59, D-ASUO, the Reichsdienstflagge marking on the fin and rudder with its stylised and centrally applied Hakenkreuz is devoid of the smaller eagle and wreathed Hakenkreuz normally found on the top, left-hand corner of this marking. This aircraft was amongst the first of the type to serve with the Seenotdienst but, at present, its service history is unknown.

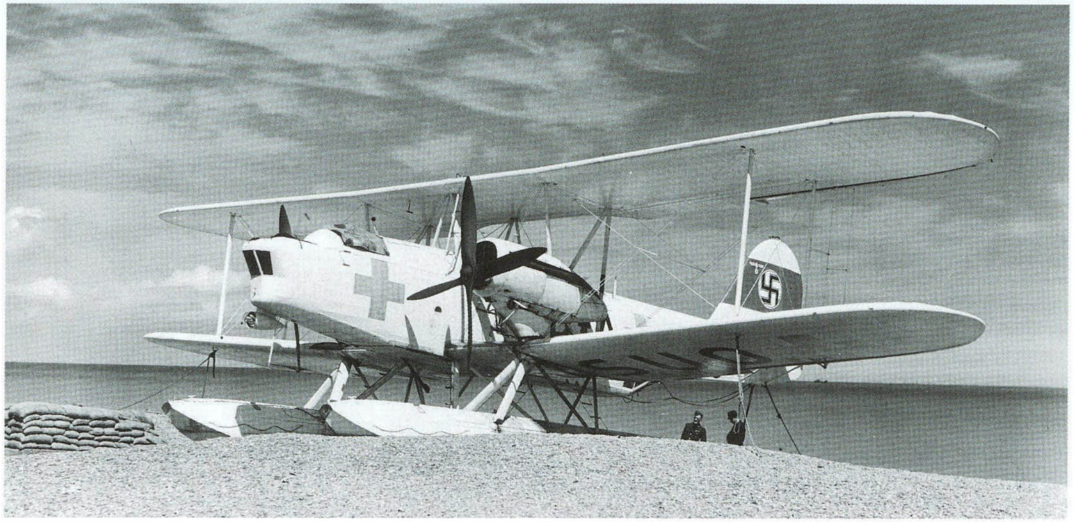
bearing civil markings and marked with the Red Cross have recently flown over British ships at sea and in the vicinity of the British coast, and that they are being employed for purposes which H.M. Government cannot regard as being consistent with the privilege generally accorded to the Red Cross.

H.M. Government desires to accord to ambulance aircraft reasonable facilities for the transportation of the sick and wounded, in accordance with the Red Cross Convention, and aircraft engaged in the direct evacuation of sick and wounded will be respected, provided that they comply with the relevant provisions of the Convention.

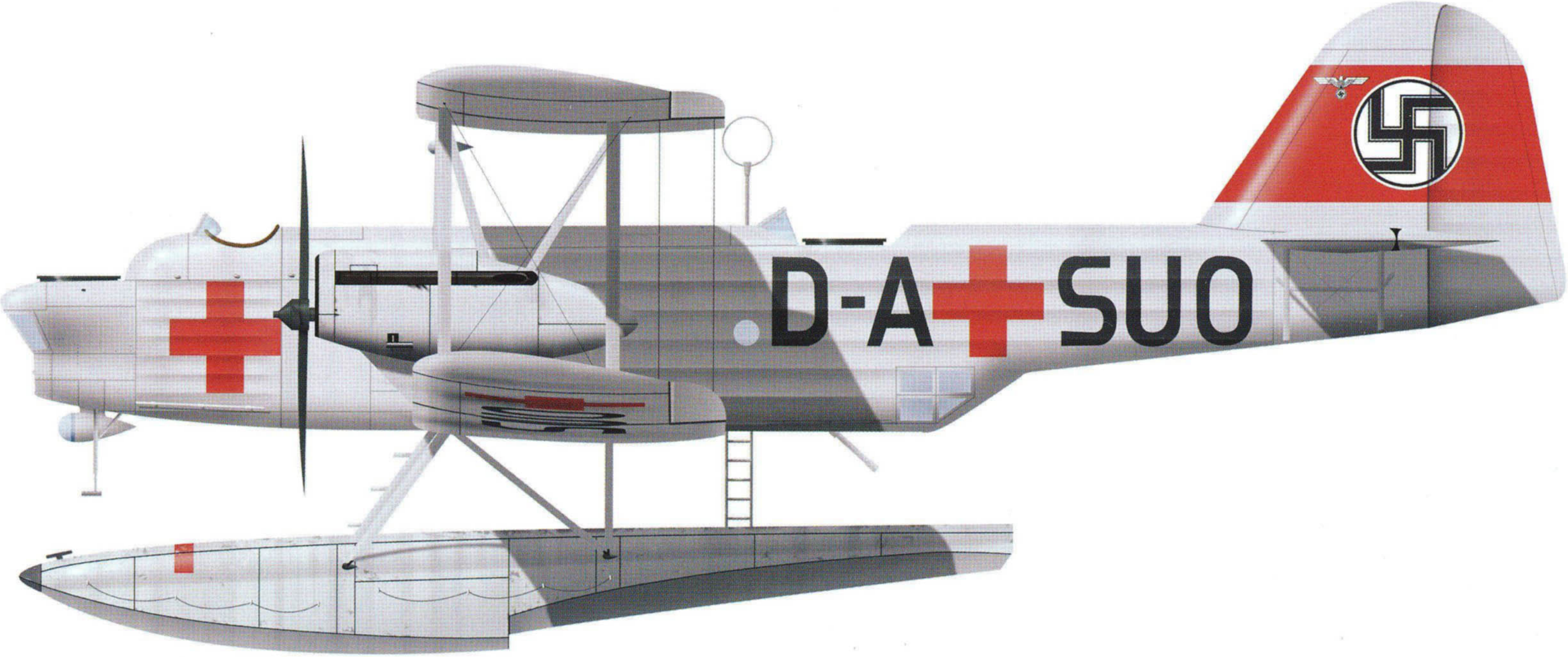
H.M. Government is unable, however, to grant immunity to such aircraft flying over areas in which operations are in progress on land or at sea, or approaching British or Allied territory, or territory in British occupation, or British or Allied ships.

Ambulance aircraft which do not comply with the above requirements will do so at their own risk and peril.'

British Prime Minister, Winston Churchill, would present a somewhat less legalistic and more sanguine interpretation of the issue when he wrote; *'We did not recognize this means of rescuing enemy pilots so they could come and bomb our civil population again... all German air ambulances were forced down or shot down by our fighters on definite orders approved by the War Cabinet.'* He further contended that since the 1929 Geneva Convention made no specific mention of rescue aircraft they were not entitled to its protection. Conversely, the Germans claimed that Articles 3, 6, and 17 of the Convention protected their rescue aircraft. According to Article 3, *'... the belligerent who remains in possession of the field of battle shall take measures to search for the wounded.'* Meanwhile, Article 6 provided that, *'Mobile sanitary formations, i.e. those which are intended to accompany armies in the field, and the fixed establishments belonging to the sanitary service shall be protected and respected by the belligerents.'* Furthermore, Article 17 claimed that, *'Vehicles equipped for sanitary evacuation, travelling singly or in convoy, shall be treated as mobile sanitary formations...'*

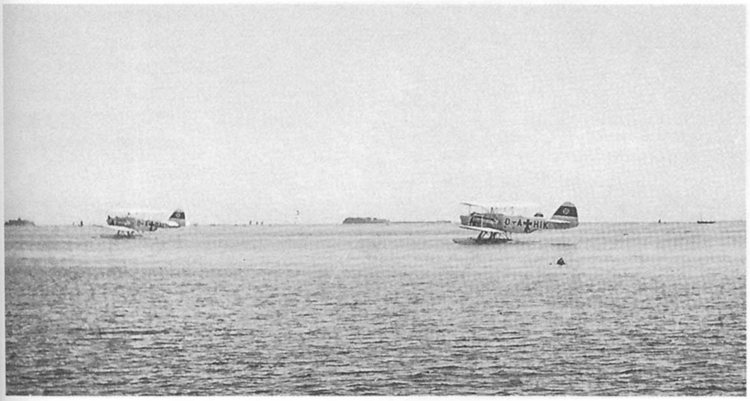


Forced down into the area of the Goodwin Sands on the evening of 9 July 1940 by Spitfires of 54 Squadron, Heinkel He 59 B-2, D-ASUO of SNFlKdo 1 was subsequently towed into Ramsgate harbour by the Walmer lifeboat and the crew taken prisoner.

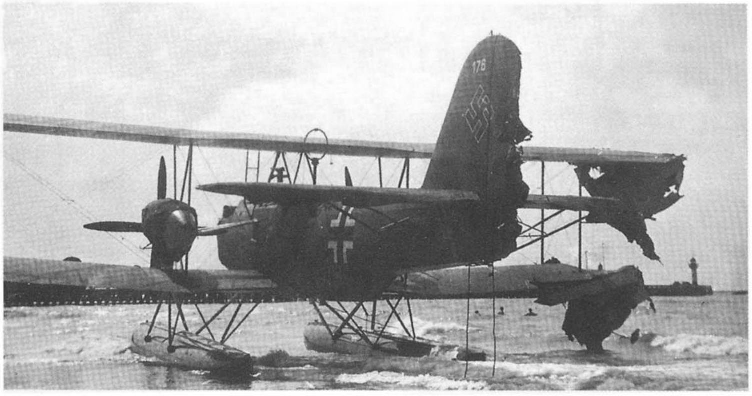


Heinkel He 59 C-2, D-ASUO of SNFlKdo 1, July 1940

This aircraft was finished in overall white with Red Crosses applied in place of the usual Balkenkreuze national markings and repeated on each side of the forward fuselage beneath the cockpit. The only forms of national markings carried were its civilian registration carried across the upper and lower wings, each fuselage side, and the red, white, and black Reichsdienstflagge applied across the fin and rudder. Although of wooden construction, the propeller blades were coated and then painted in black-green 70. While not clear in extant photographs, the lower surfaces of the floats appear to be treated but unpainted metal.



Three white-painted He 59s moored at Cherbourg on the French Channel coast during the summer of 1940. Although little is known of D-ADAI, its companion, D-AHIK (DS+KA), W.Nr.1522, is known to have served with both SNFIKdo 2 and 4. The identity of the third, moored behind D-AHIK, is unknown.

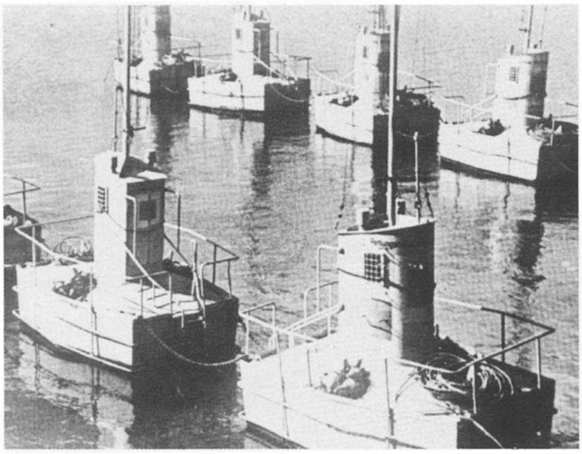


Heinkel He 59 E, W.Nr.2596 coded TY+HD photographed on the Channel front on 7 August 1940 when with SNSt.3 following its transfer from Fliegerwaffenschule (See) 1 at Parow on 21 July 1940. It is seen here after earlier having broken loose from its mooring and drifted into a nearby breakwater, severely damaging both of its starboard wings and tail assembly. Although repaired, it was later scrapped after colliding with another aircraft.

Whatever the legal position, the point was academic; German air-sea rescue aircraft were still targets of the RAF.

After 20 July, British attacks on *Seenot* aircraft increased in frequency and ferocity. *Oberst* Otto Dreyer, commander of *SNFIKdo* 2 at Cherbourg, reported that a British bomber had machine-gunned his white-painted and Red Cross-marked, unarmed Heinkel as it taxied toward a downed aircrew. Dreyer's Heinkel caught fire and sank, but the crew escaped on their life rafts and floated ashore on the Isle of Alderney the next day. In the light of such actions, the General Staff ordered all rescue aircraft armed and painted to match the camouflage schemes in use in their area of operations. Although they regained their armament, the slow and cumbersome Heinkel and Breguet-Bizerte aircraft were no match for Spitfires and Hurricanes. As a result, during August, fighters began escorting rescue aircraft whenever mission requirements entailed operations in proximity to the English coast. Adolf Galland and other *Luftwaffe* aircrew later spoke of the gallantry of *Seenot* crews that, with fighter escort, even flew into the Thames estuary to rescue German and even English flyers.

By the autumn of 1940, the primary focus of the air war had shifted to the interior of the British Isles as the *Luftwaffe* began bombing cities and centres of industry. Therefore, the German rescue forces varied their tactics according to the needs of the *Luftwaffe* and the policies of the British. Since fighter operations now centred less on massive sweeps at specific times and places to draw the RAF into combat, standing rescue patrols decreased in frequency. To offset this, on 24 September 1940, the *Generalstab General Quartiermeister 2.Abteilung*[12] ordered the immediate formation of three *Seenotbojenkommando*[13]. These were *Seenotbojenkommando* A in Cherbourg under *Major* von Bredow, *Seenotbojenkommando* B in Boulogne under a *Major* Bruhn and *Seenotbojenkommando* C in Calais, with its commander to be appointed later. The strength of each *Kommando* was one officer, one *Feldwebel*, one *Unteroffizier* and 10 enlisted men. The A and B *Kommando* were formed in Wilhelmshaven and *Seenotbojenkommando* C in Stettin, with each transferring to its respective location in France immediately after formation: *Kommando* A being subordinated to *Seenotzentrale* (*Luft*)[14] Cherbourg and *Kommando* B and C to *Seenotzentrale* (*Luft*) Boulogne. The purpose of these commands was to oversee a new series of sea rescue buoys, known to the British as '*Lobster Pots*', which were deployed in the English Channel and lower reaches of the North Sea where their distinctive



A group of Rettungsbojen (rescue buoys) at anchor in a French port prior to being anchored in the English Channel off the French coast. Constructed at the suggestion of Ernst Udet, the rescue buoys had a floor space of about 13.1 m² (43 ft²) with a 2.4 m (8 ft) cabin rising above a main float, while on the upper deck of the cabin was a mast to which a wireless antenna was connected. Although designed to accommodate four persons for several days, a significantly larger number of persons could be supported since the buoys were stocked with kerosene lamps, bedding, food and water, dry clothing and emergency medical equipment. To relieve boredom, cigarettes, brandy, and playing cards were also stowed in the cabin. When airmen – or, sometimes, sailors – were rescued, any supplies that had been used up would immediately be replaced. Finally, patch kits were stored in the buoys to guard against seepage or bullet holes. Although both the British and the Germans frequently checked the buoys, it is not known precisely how many men were actually saved by them.

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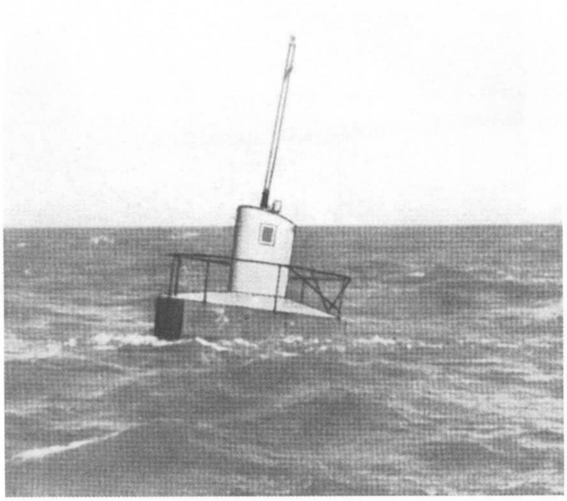
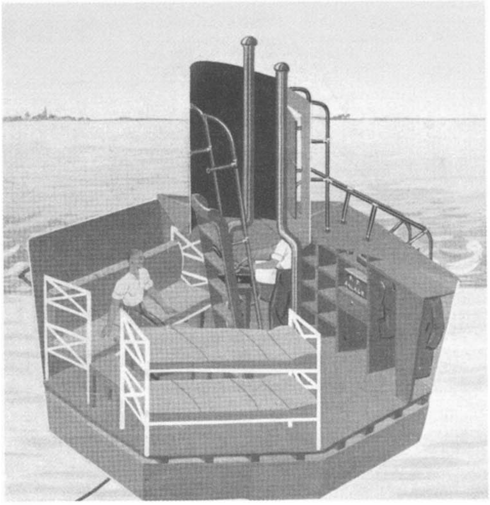
[12] Detachment 2 of the General Staff of the Quartermaster General.

[13] Rescue buoy detachment.

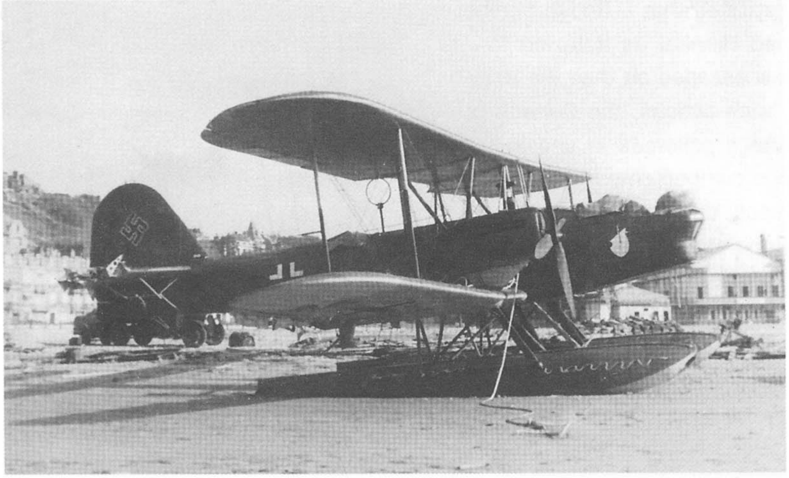
[14] Air-Sea Rescue Central (Air).

Resembling the conning tower of a partially submerged U-boat, a German rescue buoy deployed at an unknown location in the English Channel circa 1941.





A sectional diagram illustrating the typical interior layout of a German rescue buoy with its bunk-style be and storage lockers.

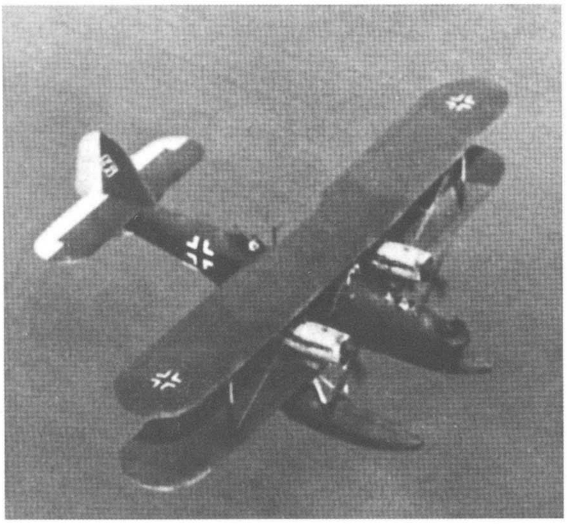


yellow paint made them visible for many miles. To place the buoys in their locations, two ships were seconded to the *Seenot* commands, the '*Wik*' and the '*Krischan*'.

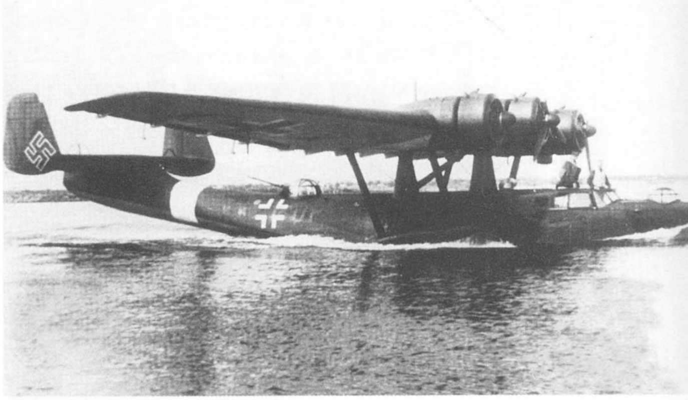
As the war in the West gradually settled into a pattern of predictability, its widening scope meant it now became necessary to expand air-sea rescue operations beyond the English Channel and North Sea.

In March 1941, the newly formed *Seenotstaffel* 7 was transferred to Varna in Bulgaria in support of German forces in the invasion and conquest of Yugoslavia and Greece. With the capture of Salonika, *SNSt*.7 moved there on 22 April where it would remain until the German withdrawal from the region in October 1944. In early 1941, plans were also in hand to transfer *Seenot* aircraft east in support of the upcoming invasion of Russia. To support the Black Sea region, *SNSt*.8 moved to Mamaia in Romania and Varna in Bulgaria. Furthermore, to provide and oversee air-sea rescue coverage during Operation '*Merkur*' – the German invasion of Crete – *Seenotzentrale Ägäis*[15] was created at the end of April 1941.

Formerly of the 3./KFlGr.906 whose sword and Viking ship Staffel emblem is visible on the nose, this He 59 C was on the strength of Seenotzentrale Boulogne when photographed at Boulogne-sur-Mer shortly after it had broken free of its moorings on 2 August 1940 and drifted into a breakwater, damaging both its starboard tail-plane and lower starboard wing.



Airborne from its base at Varna, Bulgaria during the spring of 1941, in keeping with the Luftwaffe markings directive for the Balkan campaign, the rudder, elevators, and engine nacelles of this Heinkel He 59 of Seenotstaffel 7 have been painted yellow, which contrasts starkly with the upper surface maritime camouflage of 72/73.



Dornier Do 24 N-1, KK+UP served in the Mediterranean with both SNSt.6 and 7. Finished in standard maritime camouflage it carries the white theatre band around the rear fuselage and, although the first two letters of its Stammkennzeichen on the fuselage are black, the last two appear to have been applied in a lighter grey colour.

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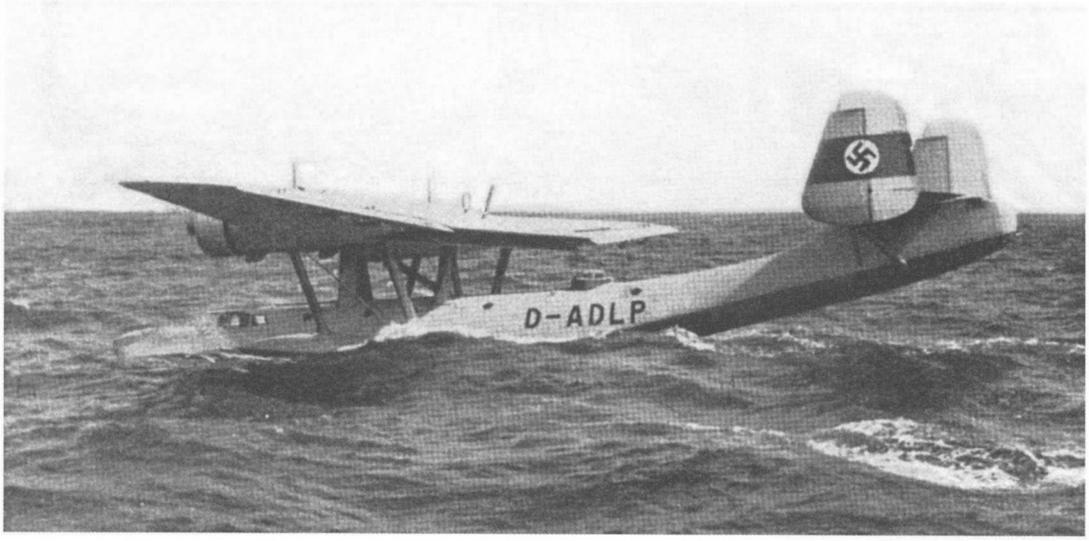
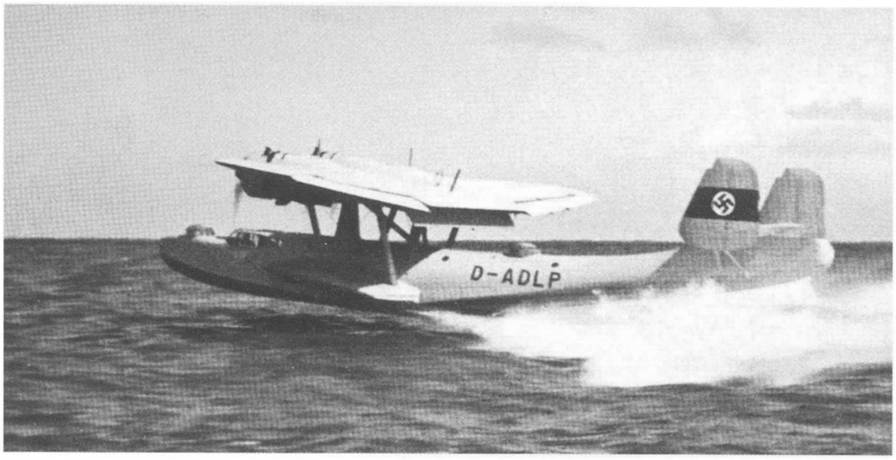
[15] Air-Sea Rescue Central Aegean.



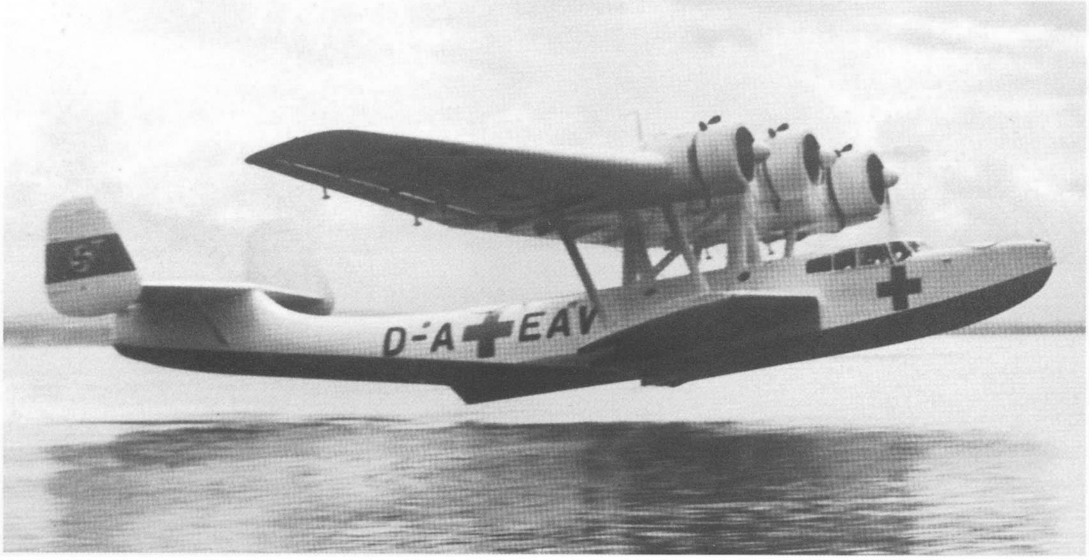
Two views of the Dornier Do 24 V3, D-ADLP, W.Nr.761 which is believed to be finished overall in grey 63.



At the time of its transfer, *SNSt.*7 had only four He 59s on strength, but was soon reinforced by several Heinkel He 60s from *Aufklärungsgruppe (See)* 126. These were returned to their parent unit when, on 4 June, *Seenotzentrale Ägais* was transferred to Constanza on the Black Sea and replaced by the newly-formed *Seenotzentrale Athen*[16].

Shortly after, one of the first operations conducted in support of the Russian campaign was flown on 24 June 1941, when *SNSt.*8, under the command of *Staffelkapitän Oberleutnant* von Buchholz, launched three of six serviceable He 59s in search of He 111 H-4 5Z+FA (W.Nr.3205) of *Wekusta* 76, lost over the Black Sea. As in the West, *Seenot* operations were increasingly conducted with fighter escort. Whereas in the West this task usually fell to *JG* 1, 2 or 26, over the Black Sea, elements of *JG* 51 were often employed in escort duties.

While the He 59 was initially adequate as the mainstay of the air-sea rescue role, by 1941 it had become obsolete. Furthermore, the expansion of operational theatres had stretched the supply of He 59s to the limit. To remedy this, an increasing number of Dornier Do 24 aircraft were retro-fitted as



Wearing an apparently white finish with a seemingly dark-painted lower hull, Dornier Do 24 N-1, D-A+EAV carries red crosses in place of its Balkenkreuz national markings, repeated on the nose beneath the cockpit, and the stylised Reichsdienstflagge across the fin and rudder. Interestingly, although this is clearly a Do 24, the Erprobungsstelle Travemünde recorded this registration as belonging to a Heinkel He 59.

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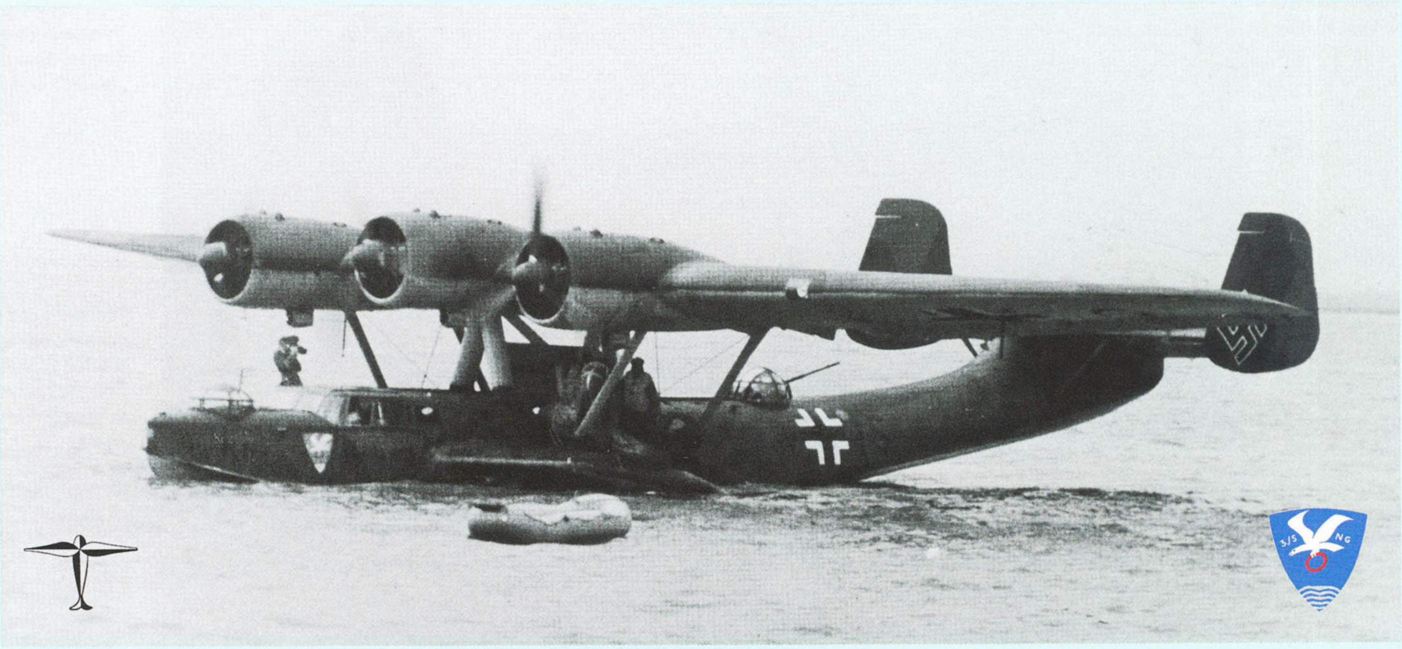
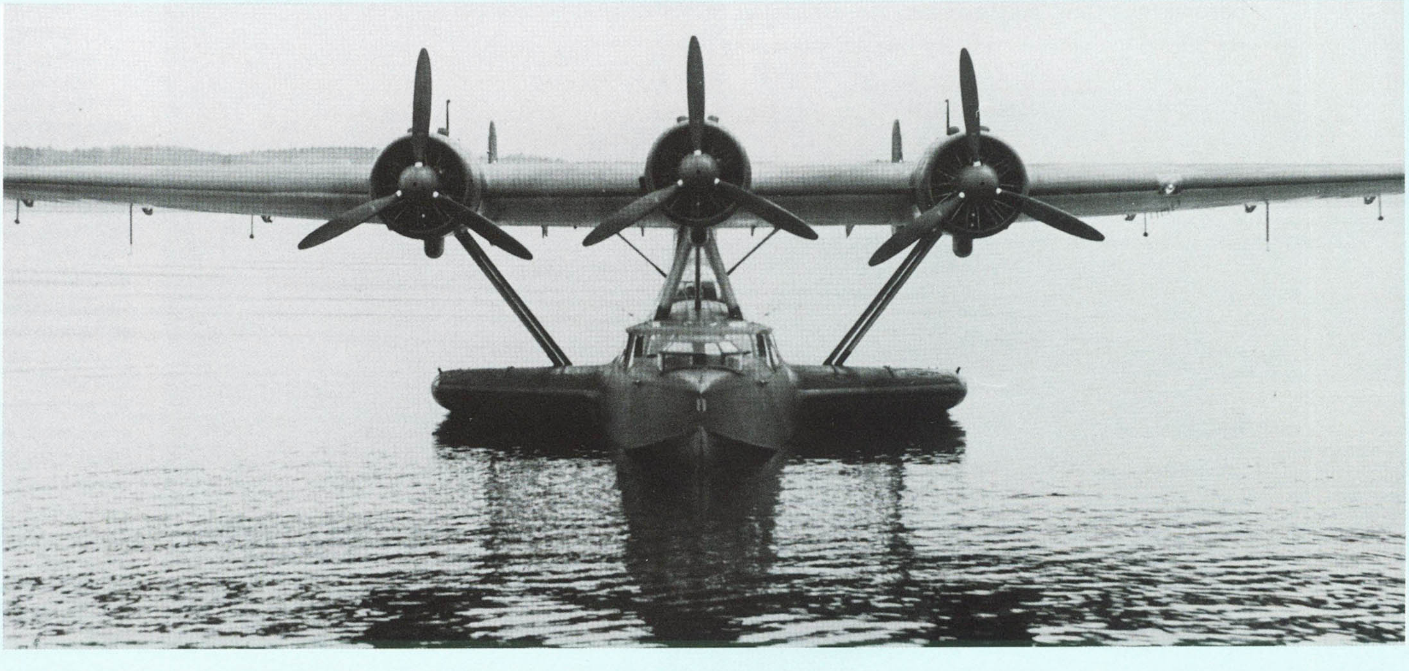
[16] Air-Sea Rescue Central Athens.



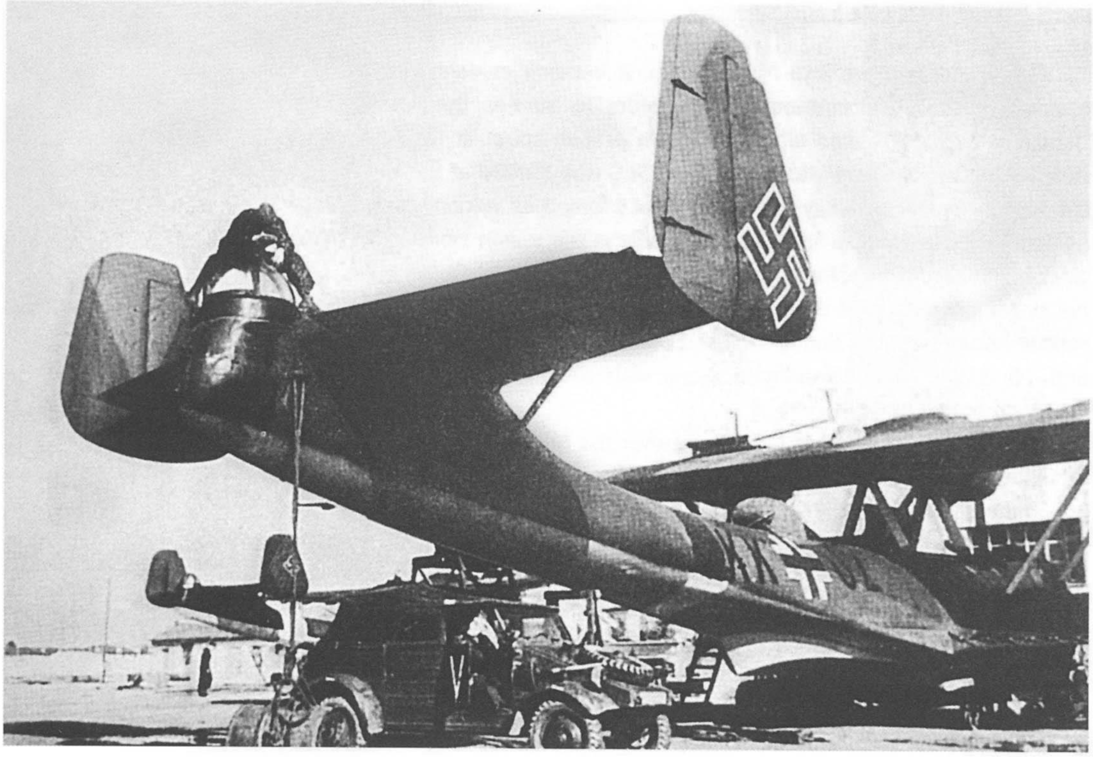
Seen moored off Cherbourg circa 1942-43, Dornier Do 24 T-2, W.Nr.53, coded CM+IS served first with SNFlKdo. 3 before later transferring to the control of Seenotdienstführer 3.

The Dornier Do 24

The Dornier 24 originated from a Dutch naval requirement in 1935 for a replacement for the Dornier Wal. With a strut-mounted wing which carried three engines, the first Do 24s for German use were powered by 600 hp (447.42 kW) Junkers Jumo 205C diesel engines. Since the aircraft was destined for an overseas market, the *RLM* was unwilling to make available any production capacity in an air industry already stretched by rearmament programs. As a result, Dornier sub-contracted the construction of the aircraft to *A.G. Dornier Flugzeuge* based at Altenrhein, on the Swiss side of the Bodensee. As several *Küstenfliegerstaffeln* were also equipped with the aging Dornier Wal design, a contract was placed with Dornier to produce the Do 24 flying boat, initially called the P.14. With a maximum range of 2900 kms (1801 miles) and a cruising speed of 295 km/h (183 mph), the Do 24 proved a considerable step forward in maritime aviation design. However, it was in the role of air-sea rescue that it proved most valuable, although several *Transport* and *Küstenflieger Staffeln* did employ the aircraft.



The crew of a Dornier Do 24 T of SNSt.6 pose for a photograph with their aircraft at an unidentified Sicilian location. Clearly visible beneath the windshield is the unit emblem consisting of a telescope-carrying Pinocchio figure wearing '7-league boots' on a brown or red-bordered yellow shield, which carries a yellow figure 6 on a red or brown rectangle in the top right corner. Formed in Syracuse/ Augusta in March 1941, the Staffel was disbanded at Venice on 19 August 1944.



Dornier Do 24 N-1, KK+UL, served with both Seenotstaffel 6 and 7 and is seen here undergoing servicing at an unknown Mediterranean location. Finished in the standard maritime camouflage of 72/73 with 65 under surfaces, it carries a white theatre band around the rear fuselage, the upper portion of which appears to have been over-painted in one of the upper surface colours.

air-sea rescue aircraft. While short-range aircraft such as the Focke-Wulf Fw 58 and He 60 continued to operate in support of the ageing He 59s, the Do 24 was now increasingly supplied to *Seenot* units.

Occasionally the *Seenotdienst* was provided with aircraft not necessarily suited to rescue functions. For example, during 1941 and 1942, some *Staffeln* were supplied with the Arado Ar 196, while in mid-November 1941, *SNSt.*8 had briefly used a six-engined Blohm und Voss Bv 222 flying boat and in 1944, *Seenotgruppe 80*[17] had operated Messerschmitt Me 410 heavy fighters alongside its Dornier Do 18s and Do 24s. However, the primary air-sea rescue aircraft used throughout the war were the He 59 and the Do 24.

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[17] Air-Sea Rescue Group 80.

COMBAT REPORT ON THE LOSS OF Do 24 (W.Nr.0098) DJ+ZX

08.10.43
Spitfire AA880 P/O L. A. Moore
Spitfire AA753 F/Lt J. A. De Neverville
Spitfire RE686 P/O L. Woloschuk
Spitfire RP445 F/O W. G. Dodd
16.50-17.45 hrs

Details:
Air Sea Rescue from Coltishall to escort Anson of 278 squadron on air sea rescue duty in position WJ.0909 about 65mi (104.5km) east of Yarmouth. After flying 20 minutes on course our a/c sighted another a/c flying west at sea level and closed to investigate. They recognized this a/c to be a Do.24. They immediately dropped long range tanks and attacked. All four pilots gave bursts and strikes were seen from their fire and the enemy a/c caught fire at the port and starboard engines. It crashed into the sea at a very low height, disappeared and no crew were seen. The a/c is claimed as destroyed, shared by all four pilots.

Summary of events:
Whilst doing A.S.R patrol Can J15470 F/O W. G. Dodd, Can C1346 F/L J. A. H. G. De Niverville, Can J17857 P/O L. A. Moore (USA) and Can J18360 P/O L. Woloschuk sighted a Do.24, diving to attack in turn, each secured strikes on the enemy a/c and P/O Moore returning for a second attack shot away the port wing. The a/c plunged into the sea and there were no survivors. Each pilot engaged 1/4 of an a/c destroyed. There were no casualties or damage to Squadron a/c.

With the Axis move into North Africa, it became evident that air-sea rescue services would be required in the Mediterranean and in order to service the vast expanses of the region, various detachments were based along the North African coast at locations such as Tripoli, Benghazi, and Bomba-Bay. In February/March 1941, *SNSt.*6 was formed at Syracuse in Sicily where it remained until the Allied invasion of Sicily on 10 July 1943 forced its relocation to Portofino near La Spezia, on the north-west Italian coast. As Allied superiority in the region increased, during September 1944, several *Seenot* units were transferred to Athens, as operations by German seaplanes over Italian waters were no longer possible due to Allied air patrols. This transfer reflected a growing constriction in air-sea rescue operations and during August 1944, *Seenotdienstführer* 2[18] – the command overseeing the 6 and 70 *SNSt.* – was disbanded along with *SNSt.*6 and was followed in November 1944 by the disbandment of *SNSt.*70.

Those rescue operations carried out over the North Sea and Atlantic Ocean mirrored the increasing difficulties facing air-sea rescue services in the Mediterranean during 1943 and 1944. Throughout the war, the main burden of air-sea rescue for the North Sea fell to *SNSt.*4 whose operations in the region were supplemented in December 1942, with the transfer of *SNSt.*2 to Schellingwoude. Even so, rescue operations in the region were continually plagued by Allied fighters and losses mounted. One such loss was that of Do 24, DJ+ZX, of *SNSt.*2 which was lost to RAF fighters on 8 October 1943 with its crew, including the *Staffelkapitän, Oberleutnant* Harald Mehlhorn, being killed.

The increasing activities of Allied fighters and patrol aircraft led to the formation of a *Teil-Staffel Land* [19] based at Jever for search and protection duties. Formed in August 1944 and attached to *SNSt.*80 it was equipped with Junkers Ju 88 C-6 and Messerschmitt Me 410 A heavy fighters; a request by the *Staffel* for Focke-Wulf Fw 190 F-8s was refused owing to more pressing demands elsewhere. While these aircraft did perform search and rescue duties, they were intended as escorts for other, more appropriate, *Seenot* aircraft, with some even scoring successes; one such aircraft was Me 410 A-1 W.Nr.41010016, F4+EC of *Seenotgruppe 80*, which was photographed in May 1945 with two *Abschussbalken*[20] painted on its rudder. It is thought that this aircraft may possibly have been that of *Oberleutnant* Langer, who had claimed two victories in the opening week of October 1944.

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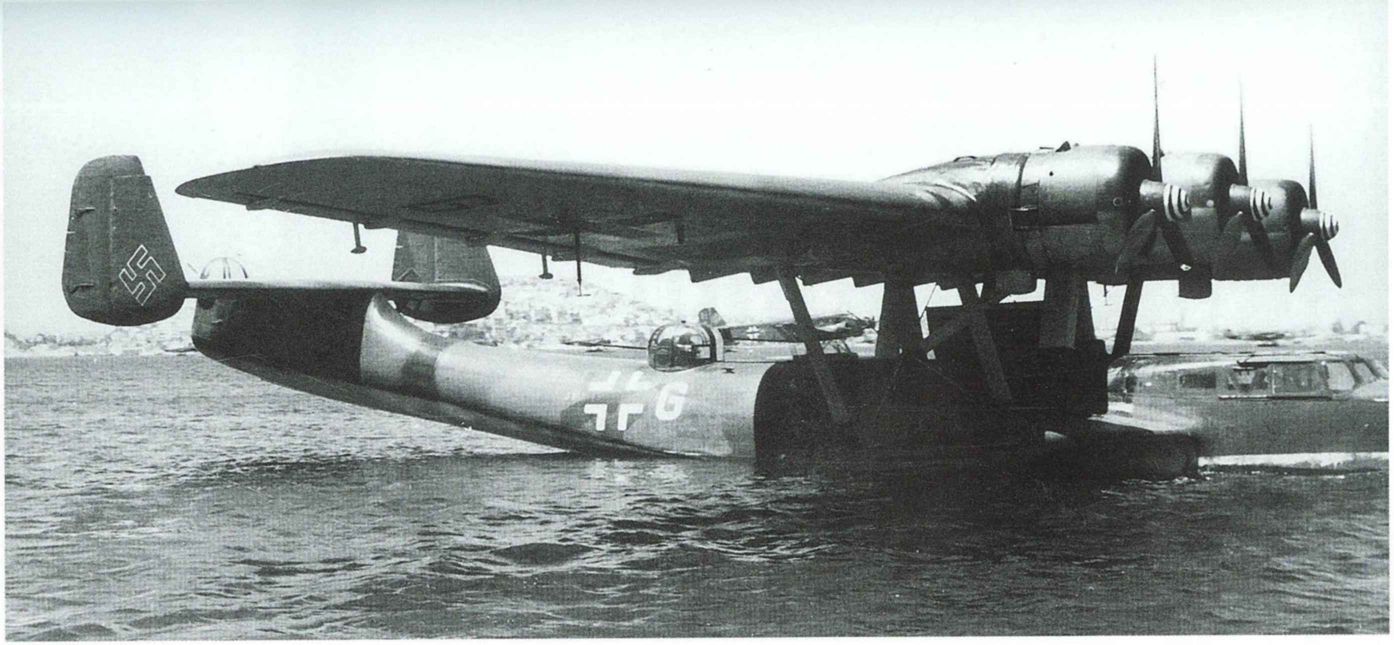
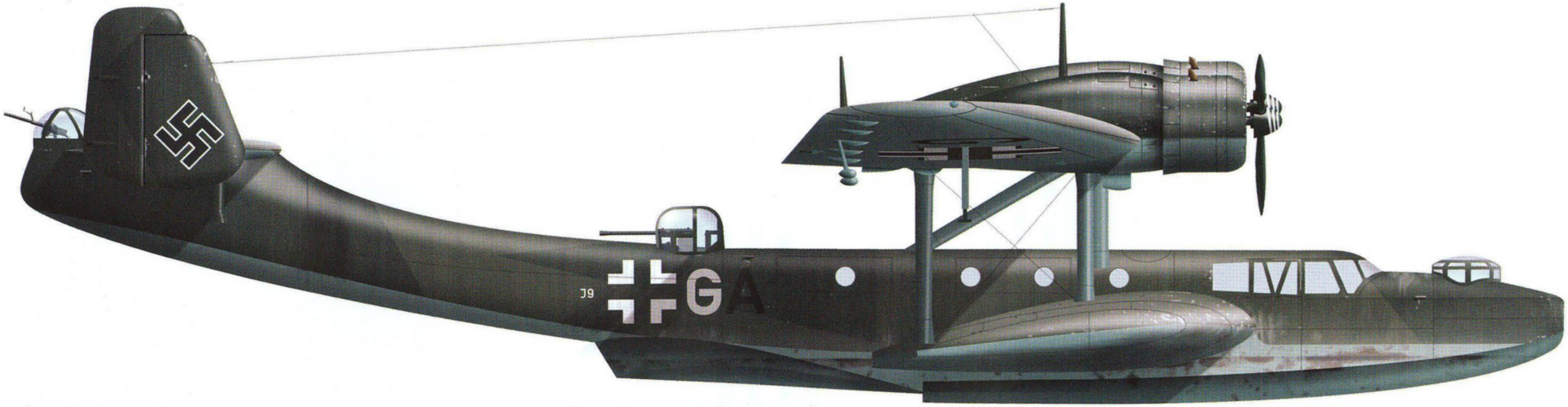
[18] Commander of Air-Sea Rescue Services 2.

[19] Special Squadron, Land.

[20] Victory bars.



Dornier Do 24 coded J9+GA of SNSt.80 seen here at an unidentified mooring in the closing months of the war. Re-formed on 19 August 1944 from Seenotflugkommando 4, it was based at Norderney until March 1945 when it moved to List. It remained here until the cessation of hostilities.



Dornier Do 24 T-2, J9+GA, Seenotstaffel 80 circa 1944

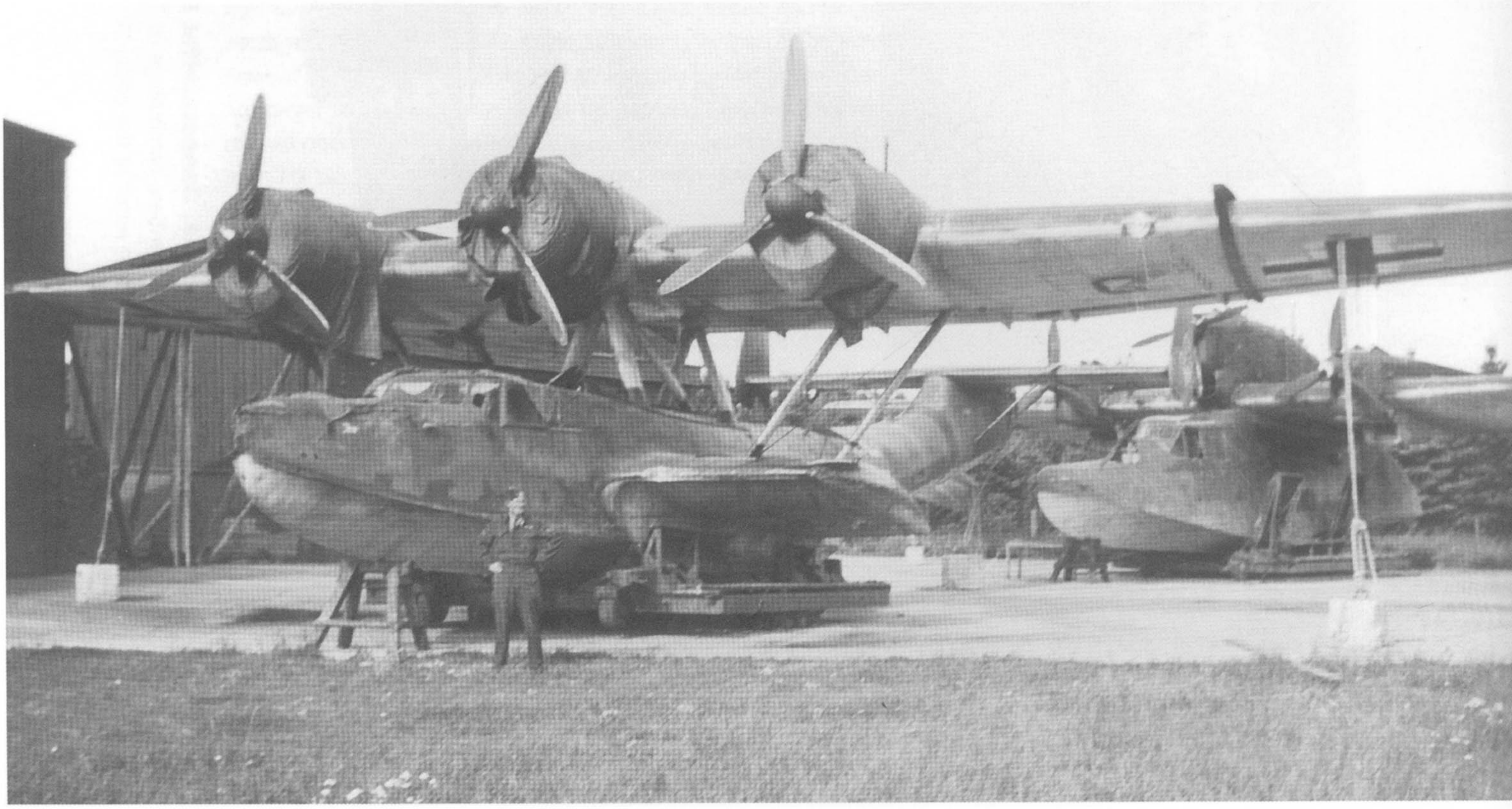
Finished in the standard maritime camouflage of 72/73 over 65, J9+GA has its unit alphanumeric code applied in white at one-fifth height and the last letter of the code, 'A' is in black. The individual aircraft letter 'G' is also in white as are the spiral designs on the spinners.

Efforts to improve air-sea rescue operations were also reflected in a general reorganization of the *Luftwaffe* in the late summer of 1944. On 19 August, the *OKL*[21] issued an order of reorganization for the *Seenotdienst,* the meaning of which was presented more thoroughly in an interim bulletin issued on 1 November 1944 by the *General des Seewesens der Luftwaffe*[22]. The purpose of the reorganization was to release personnel for home defence duties, primarily in the army. While, by 1 November, the area of operations at sea had significantly contracted, there were still waters – namely the Baltic and North Sea – where activities were at a peak. Although the overall restructuring that occurred meant a significant drop in the number of command units, the level of efficiency at front line level was not hampered. The general ramifications for the reorganization merely meant;

1) Discontinuation of the post of Chief of Air-Sea Rescue Services at *Luftflotte* level
2) Consolidation of the Air-Sea Rescue *Staffeln*
3) Discontinuation of regional and detachment commands
4) Remaining units consolidated in *Gruppen*
5) The instruction of land-based air units in air-sea rescue operations to fulfil requirements in such operations if required.

In general, the reorganization was completed with minimal impact and air-sea rescue services continued to function as normal.

However, with the war drawing to a close and German borders receding, operations by the various *Seenotstaffeln* were reduced as supplies and fuel became scarce. Thus, by the end of August 1944, the majority of the *Seenotstaffeln* had been disbanded and their personnel transferred to other *Luftwaffe* units or to ground defence duties. Nevertheless and despite the wholesale reduction in air-sea rescue capabilities and *Seenotstaffeln* numbers, operations were still conducted over the waters to the north of Germany. Even during the last days of the war, and for some weeks afterwards, *Seenotstaffeln* aircraft – almost exclusively Do 24s – operated in support of the beleaguered *Heeresgruppe Kurland* (Army Group Courland) in Latvia. While the contribution of the only *Seenotstaffel* – *SNSt*.50 – to the operation was limited, the audacity and bravery shown by its flying personnel was exemplary, knowing that in the last days and hours of the war, they could very well be shot down and captured by the Russians, or in fact killed.



In this photograph, believed to have been taken at Stavanger in May of 1945, an RCAF aircrew member poses in front of a surrendered Dornier Do 24 and Bv 138, both of which sit on beaching trolleys and are tied down as a precaution against high winds.

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[21] *Oberkommando der Luftwaffe.*

[22] Chief of the Marine Air Arm.

Mine search

Transport duties were not the only important second line duties that were required of naval air units during the war. As with Britain, Germany relied heavily on seaborne trade – especially with Sweden. Even if sufficient naval and air forces had been available to escort every German convoy, shipping was still at the mercy of minefields. In September 1940, a special unit was formed at Gilze–Rijen in Holland to provide mine detection services for the German merchant fleet and *Kriegsmarine.* Although the unit was mostly equipped with second line aircraft such as the Junkers Ju 52/MS and Dornier Do 23/MS, several of the more advanced Blohm und Voss Bv 138, Ha 139 and Dornier Do 24 aircraft were allocated on a trial basis but were found unsuitable. Initially under the command of *Leutnant* Ellgas, the unit operated across Europe and the Mediterranean. Originally named *Sonderstaffel Mausi*[1], during October 1942 the *Staffel* was increased to *Gruppe* status with five *Staffeln*, and renamed *Minensuchgruppe* 1[2]. In February 1944, the *Stab* was disbanded and thereafter the five *Staffeln* operated independently.

In order to sweep sea lanes clear of enemy mines, the unit's aircraft were fitted with a special degaussing ring. With a diameter of 15 m (47 ft), the degaussing ring was designed to carry an electric current which was produced by a twelve-cylinder Mercedes Benz *Nürburg* petrol-engine dynamo set. The dynamo set could produce a maximum output of 500 amps (110 v), although 300 amps (66 v) proved sufficient. To regulate the system at a current strength, a small control set was installed in the observer's position on-board the aircraft.

According to a 1944 prisoner interrogation of a captured aircrew *Unteroffizier* from the 1./*MSGr* 1, the theory of minesweeping was for aircraft to sweep up a particular grid on a single polarity, reversing the polarity on a second sweep of the same grid. A second, more resource-intensive countermeasure employed in anti-mining operations was termed the *Knallkörpergerät*[3], or *K.K. Gerät.* This system consisted of small, semi-circular packs measuring about 30 cm x 12.7 cm x 12.7 cm (12 in x 5 in x 5 in), thirty of which were packed into a single case. In order to release these packages, float-equipped Ju 52 seaplanes had access panels cut into their fuselage floors through which these devices were dropped. Upon hitting the water, the packing case exploded, releasing the small packages, thereby creating a level of noise and resonance similar to a passing ship and thus able to dupe acoustic mines into detonating. However, it appears that the most success in destroying enemy mines was derived from the more traditional degaussing system and the *K.K. Gerät* remained of limited operational use.

A typical mine search patrol consisted of a flight of three aircraft, usually in line astern formation. However, this number frequently varied depending upon the area being swept and the current level of operational readiness of *Staffel* aircrew. Yet the more aircraft employed on an operation, the more a suitable width of sweep could be cleared. In order to be successful, though, crews had to fly at low level over the water at a speed of around 200 km/h (124 mph). While this was less of a difficulty for the slower Ju 52s, for the more advanced Bv 138, this presented a problem. More importantly, the slow speed required for operations required good flying weather with minimal to no sea swell. At slow speed, low over the water, aircraft and their crews were often in precarious situations with regard to changing weather conditions. However, on clear weather flying days the mine search crews could, and often did, fly several sorties, although two seems to have been the average. Given the optimum depths of mines and the strength of the anti-mining equipment, the necessary height and speeds of the sorties dictated that operations could only be carried out when visibility was above 2 km (1.25 miles) and seas were calm.

Aside from the inherent difficulties and dangers of operating low over the water at slow speeds, a further disadvantage for crews was that of navigational considerations. Owing to the magnetised degaussing ring and the lack of a gyrocompass in many mine search aircraft, sweeps could only be conducted within sight of land or visible navigational aids such as islands or rocky outcrops. As a result, the average sortie only lasted for between two and three hours, although sorties of up to four hours' duration were not uncommon. Sorties often overflew the same swept channels for up to five days in order to guarantee a high degree of success in destroying enemy mines. Of major importance in any mine search operation, if shipping was encountered, was that immediately before over-flying the ships or convoy, crews were instructed to switch off their magnetic device, only re-engaging it after the ships had been cleared. This was done so as not to affect the ship's navigational systems or accidentally to detonate any lethal cargo or other explosive ordnance that the ships may be carrying.

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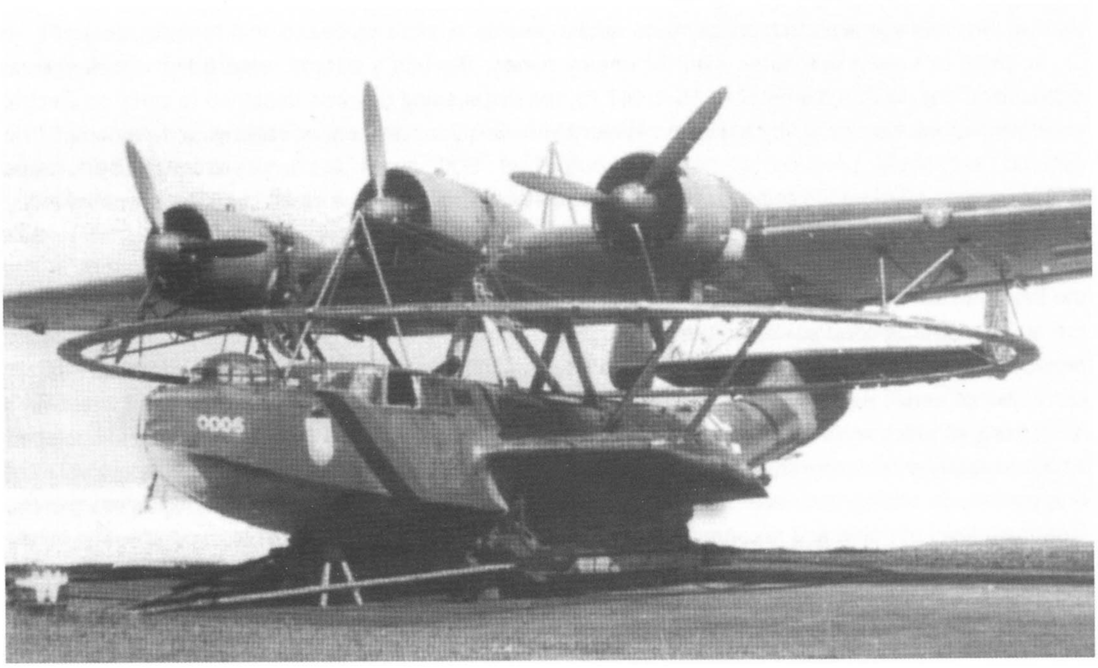
[1] Special Squadron Mouse.

[2] Mine Search Group 1.

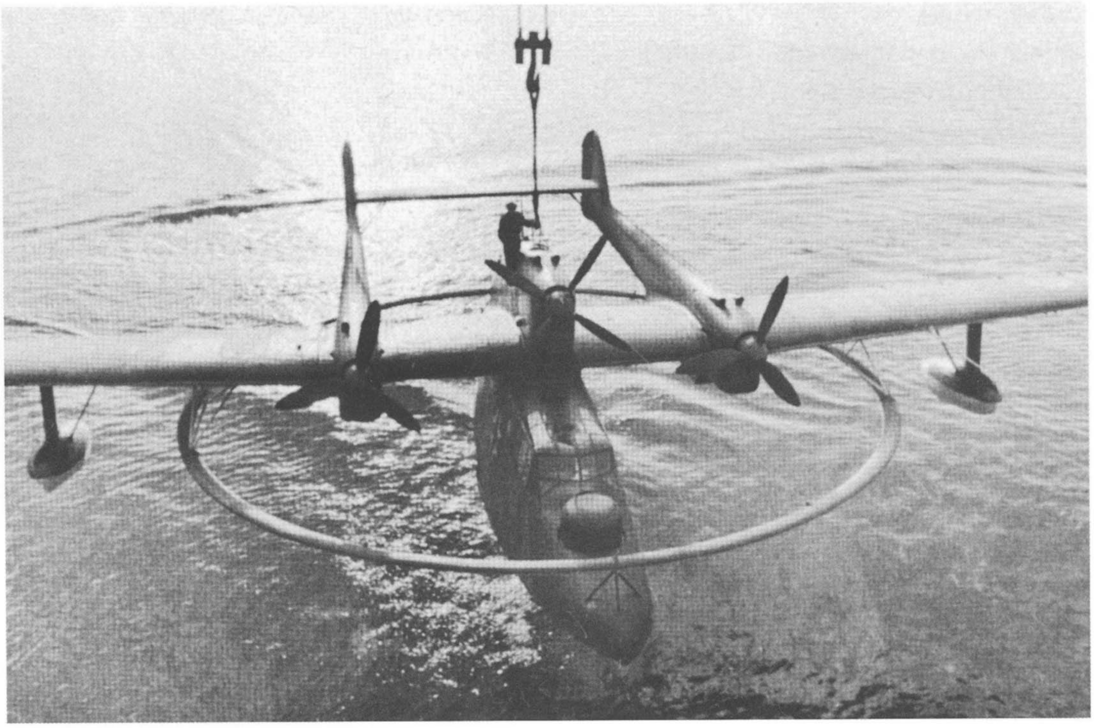
[3] Literally, 'Banger device'.

In September 1944, *Oblt.* Kolossa, the *Staffelkapitän* of the 5./MSG 1, informed all ten observers of the unit that they were now considered superfluous to the operational requirements of the *Staffel* and that they were being transferred either to *Flak* or to *Fallschirmjäger* [4] regiments. At the same time, it was stated that no new personnel were expected to cover the loss in crew function; instead, the observer's duties were to be partly taken over by the pilot and partly by the flight engineer. This obviously influenced the efficiency of mine searching operations, but with the German borders shrinking and RAF Coastal Command anti-shipping aircraft exacting a heavy toll on German merchantmen, the importance and lasting effect of the order proved minimal.

These air units all formed a vital function in the overall prosecution of the naval war in the air. As with their *Küstenflieger-* and *Seeaufklärungsgruppen* contemporaries, the necessary resources required to operate efficiently were never afforded to the Transport, Training, or *Minensuchstaffeln.*



Seen here with a degaussing ring fitted, Dornier Do 24, W.Nr.0006, was also used in degaussing trials but was found unsuitable for the role.



Left and opposite page: Four views of a Blohm und Voss Bv 138 MS used for aerial degaussing trials at the request of the Kriegsmarine but, like the Do 24, it was found inadequate for the task. It is not known with any certainty if the Bv 138 was used operationally by the Minensuchgruppe 1.

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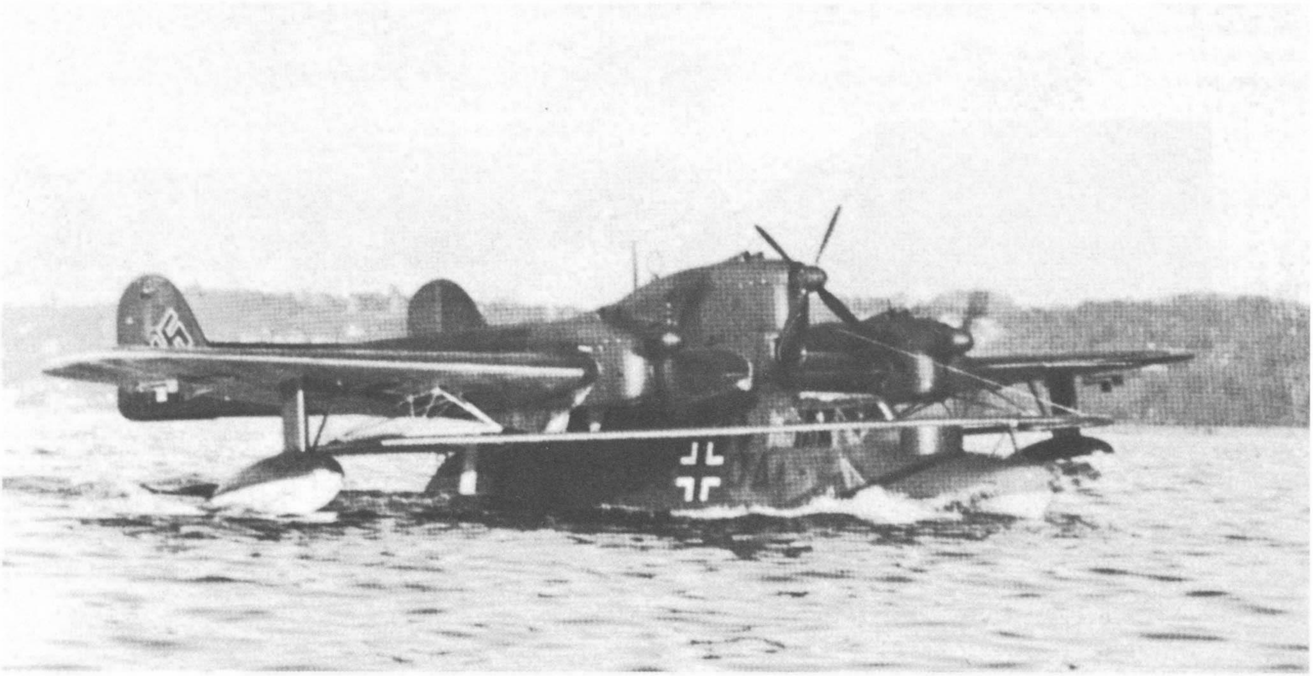
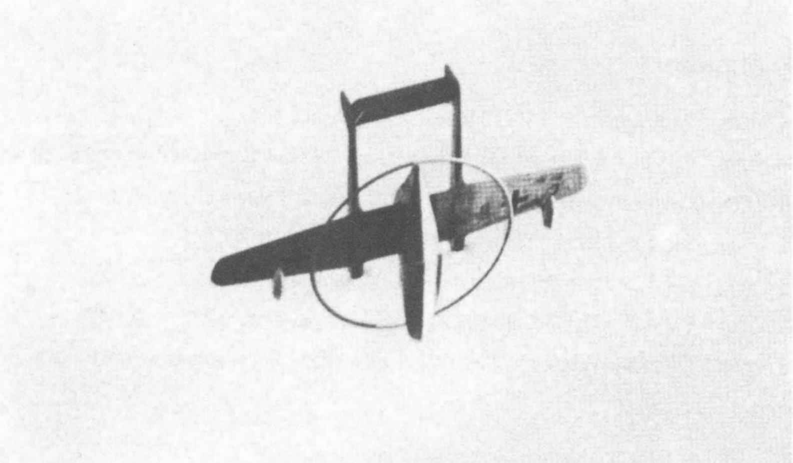
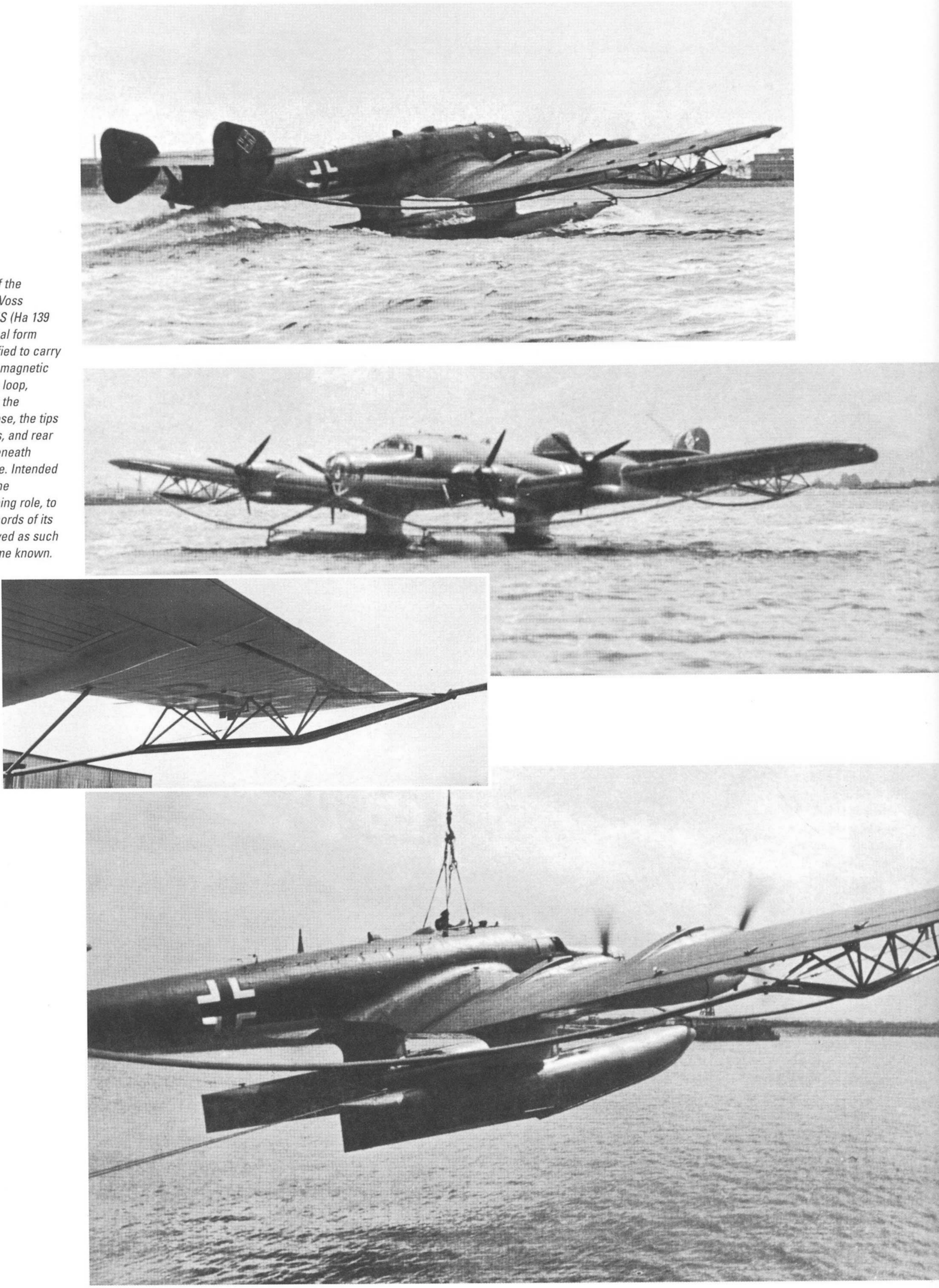
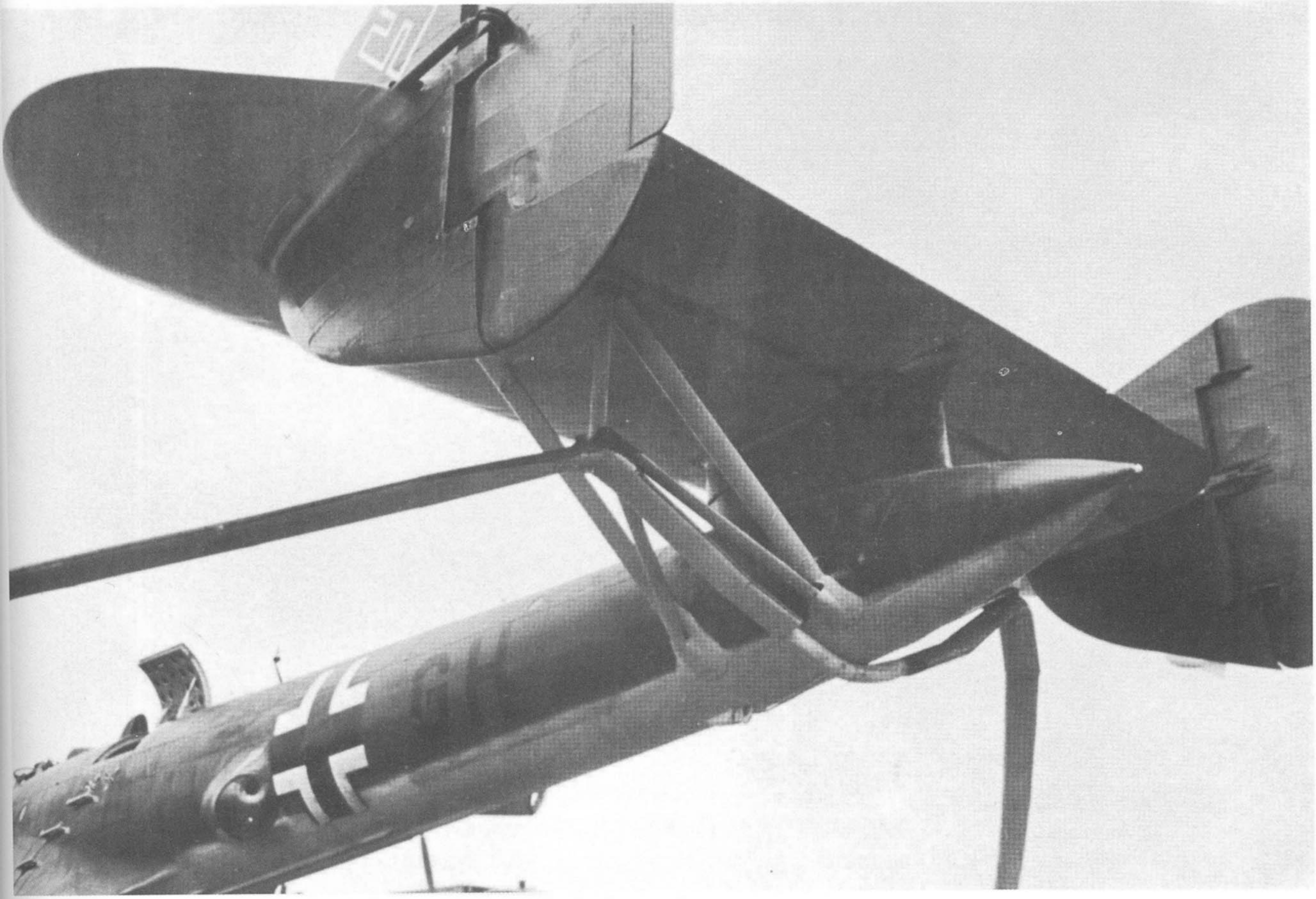
[4] Parachute.

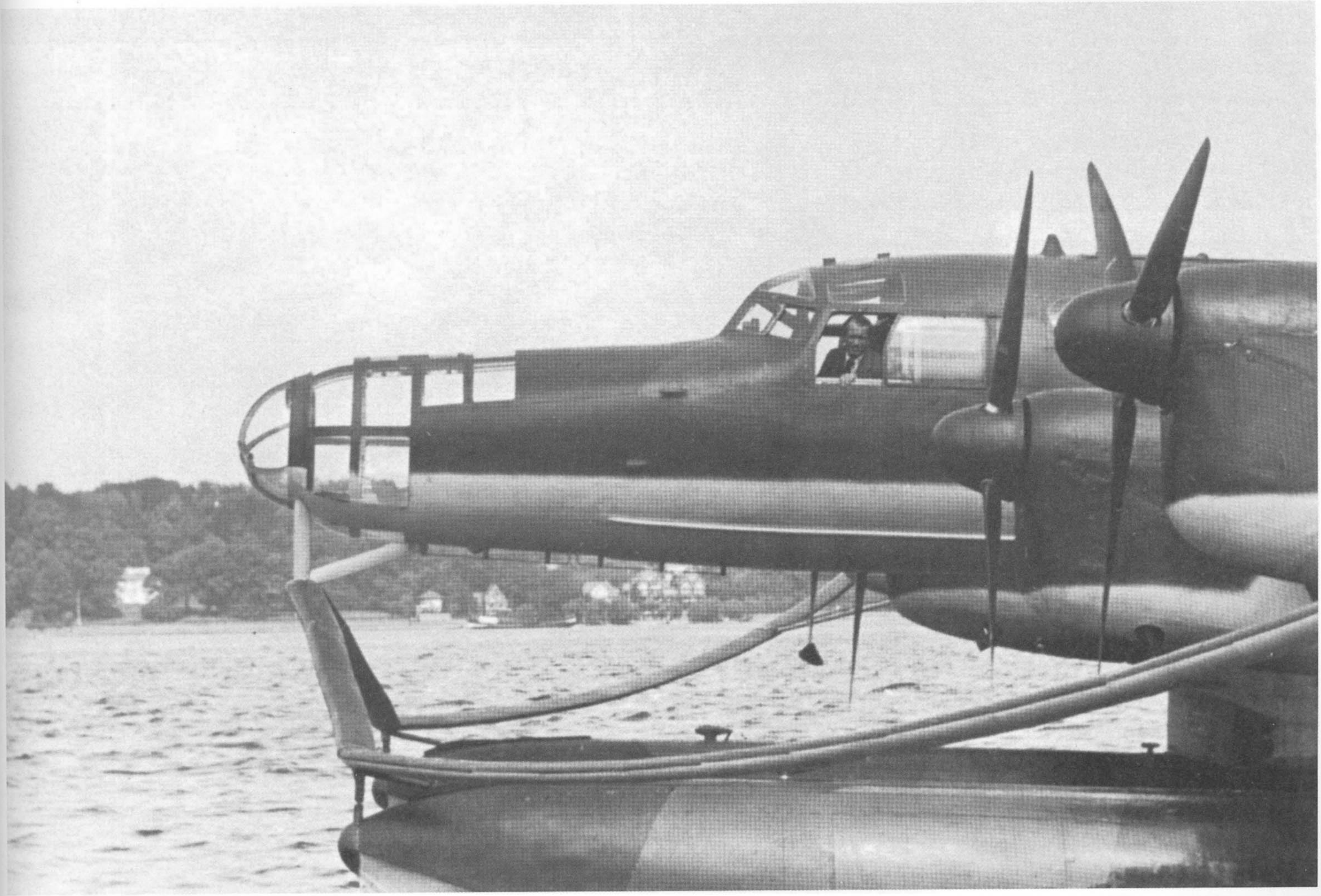


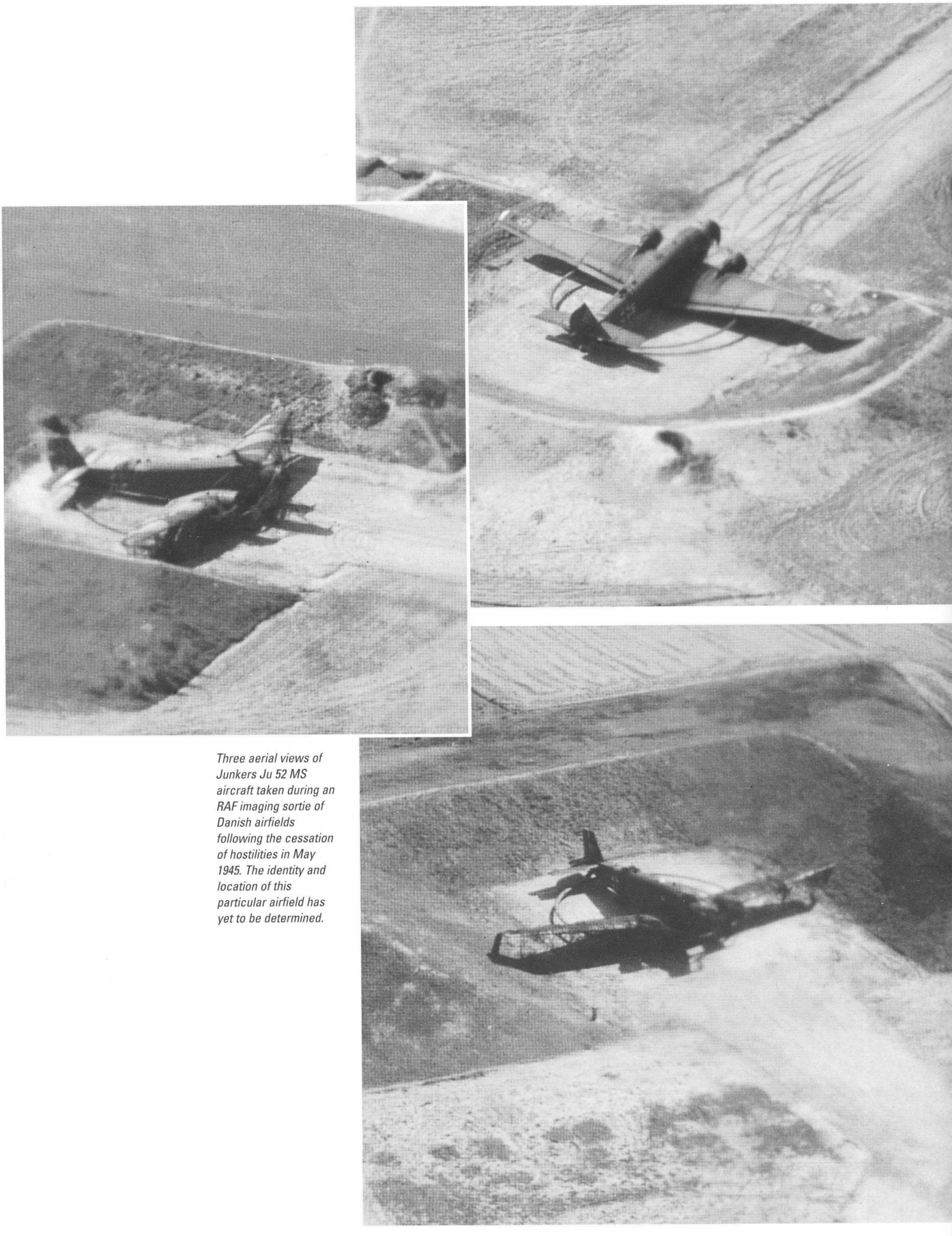




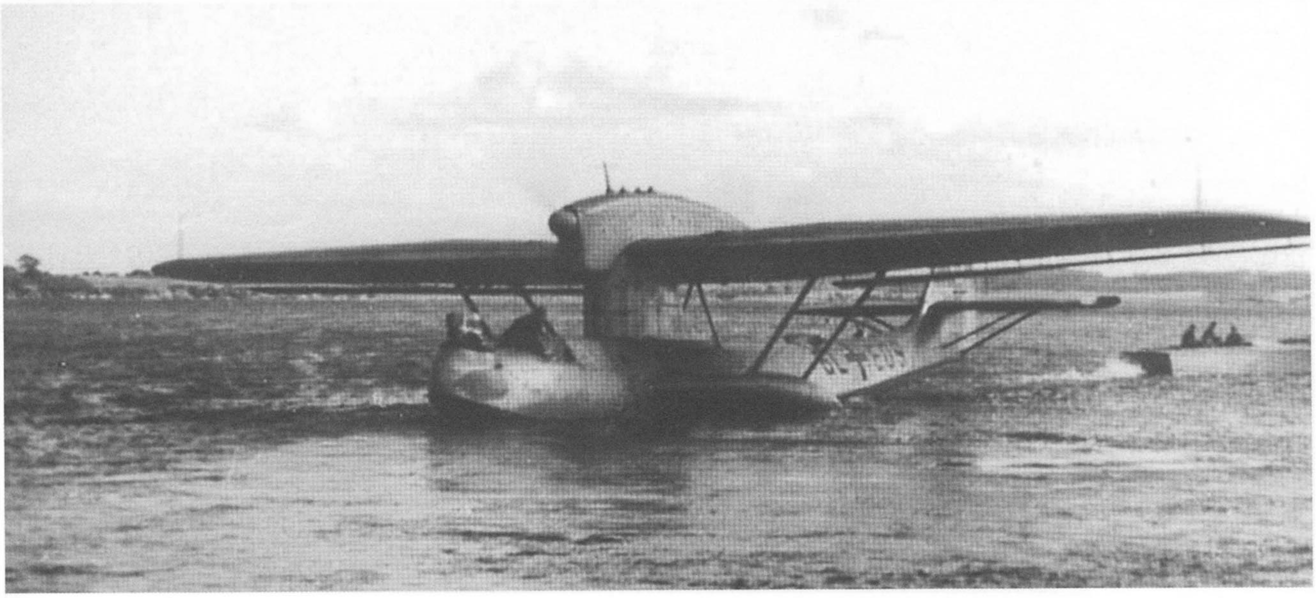
Six views of the Blohm und Voss Ha 139 B/MS (Ha 139 V3) in its final form when modified to carry an unusual magnetic degaussing loop, attached to the fuselage nose, the tips of the floats, and rear fuselage beneath the tailplane. Intended for use in the minesweeping role, to date no records of its having served as such have become known.







Three aerial views of Junkers Ju 52 MS aircraft taken during an RAF imaging sortie of Danish airfields following the cessation of hostilities in May 1945. The identity and location of this particular airfield has yet to be determined.



Probably finished in overall 63, Dornier Do 18 D-1, 6L+EOS of the 10.(See)/LG2 is seen here running up its tandem-mounted Junkers Jumo 205C diesel engines prior to taking off from its home base at Kiel-Holtenau circa 1939. First formed at Travemünde in November 1938, by September 1939 the Staffel had transferred to Kiel-Holtenau where it remained until disbanding in October that year.

Second Line Units

The most important maritime air units were obviously the training establishments set up to provide a steady stream of trained aircrew. These units were no different in structure and purpose to their land-based brethren; the only difference being the types of aircraft they employed. The general training of a prospective maritime pilot followed the same path as those destined for land-based air assignments. Initial assignment for prospective aircrew was the *Fliegerersatzabteilung*[1] later known as the *Flieger-Ausbildungsregiment*[2]. It was here that students were introduced to radio operations and map reading. From here they moved through a variety of schools in which they were taught increasingly more demanding aspects of aviation. Those students selected to graduate to multi-engine aircraft were separated at the C licence level, which was for aircraft over 5,000 kg (11,000 lbs) for land-based aircraft and 5,500 kg (12,100 lbs) for marine types. At this point future maritime aviators were transferred to a *Flugzeugführerschule* (*See*)[3] to complete their training. Throughout the period 1933–1945, there were three such units, the oldest of these being *FFS* (*See*) 1, established at Warnemünde in 1933.

Elementary Flight Training Schools (Sea)

FFS (See) 1	Founded at Warnemünde in 1933. Began life as DVS Warnemünde in 1925. Training dispersed in January 1941.
FFS (See) 2	Founded at Pütnitz in 1936. Renamed FFS (C) 17 in January 1941.
FFS (See) 3	Founded at Stettin in 1934 as DVS Stettin. Became FFS in October 1939. Probably absorbed by A/B 118 during late 1940.

For naval air cadets, the majority of the training was carried out in aircraft types which currently equipped operational units. These included the Dornier Wal and Do 18 aircraft, although the Heinkel He 59 and He 60 aircraft were also common. Additionally, with the demands of front line units taking precedence, the schools were often required to rely on non-combat types such as the float-equipped Junkers Ju 52/3m (*See*) and Ju W 34 in order to service training regimes. The more modern aircraft in service with combat units, such as the Heinkel 115 and Blohm und Voss Bv 138, were less common at training establishments.

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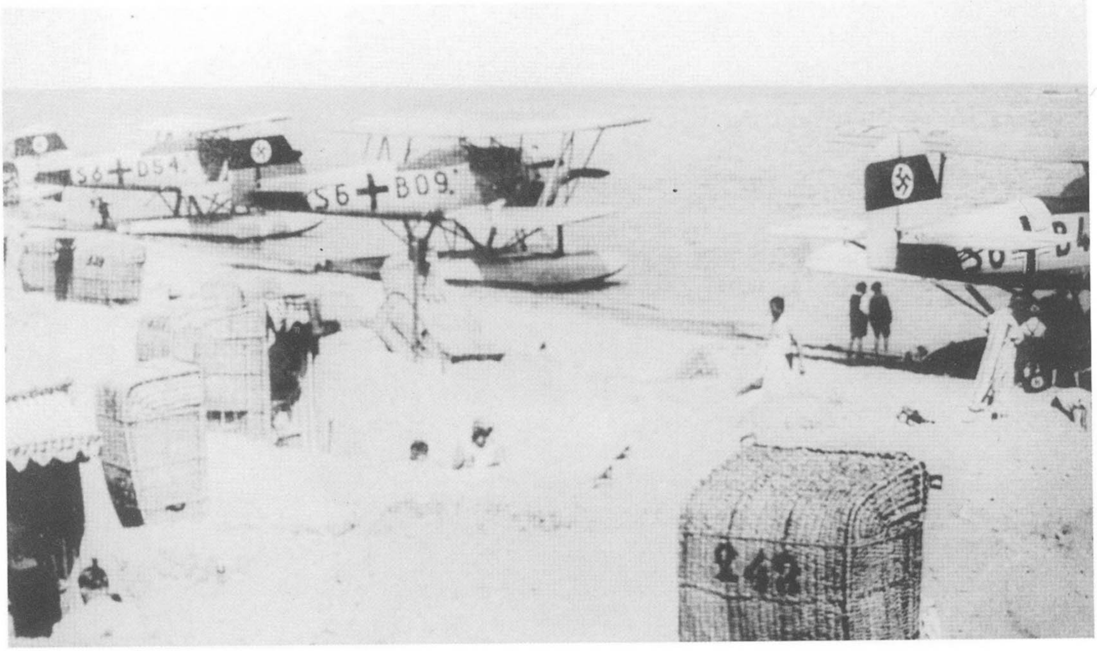
[1] Flyer Replacement Detachment.

[2] Flyer Training Regiment.

[3] Seaplane pilot school.



Two pre-war views showing Heinkel He 60s and a He 59 of the Flugzeugführer-schule (See). The S6 code identifies them as belonging to a training school within the Kiel-based Luftkreiskommando VI – the letter gives the individual Staffel identity and the remaining number(s) identify the individual aircraft within the school.

Once a pilot had gained his licence, he then moved on to one of several *Fliegerwaffenschulen* (*See*)[4] which provided training in gunnery and weapons, such as the aerial torpedo. Initially only two of these schools were set up – both in 1934. The first of these, *FWS* (*See*) 1, was based at Parow and was an offshoot of *FFS* (*See*) 1, itself having been formed from the remnants of the *Deutsche Verkehrsfliegerschule* (*DVS*)[5] at Warnemünde. With the outbreak of war in 1939 and a resultant growth in demand for replacement aircrew, on 27 January 1940 the *Flieger-Ergänzungsgruppe* (*See*)[6] was formed at Kamp in Pomerania from *Flieger-Ersatz-Battalion* 26[7]*.* The main duty of this unit was to act as a replacement pool for the various front line maritime air units. The unit operated in a similar fashion to the Allied Operational Training Units and provided aircrew the opportunity to train in a more realistic combat environment before being posted to a fully-fledged combat unit.

In order to fulfil the final stage of aircrew training, the *Flieger-Ergänzungsgruppe* had on strength a variety of maritime aircraft types, including the Dornier Do 18, Heinkel He 114 and 115 and later the Blohm und Voss Bv 138. Upon graduation, aircrew members generally joined the *Ergänzungsgruppe* to gain an introduction to operations, although this was not always the case, and was usually dependent upon the demands of front line units whose personnel requirements were met by the *Ergänzungsgruppe*.

However, not all replacement aircrew were necessarily sent to front line units. At the onset of war, the majority of aircrew were sent to *Küstenfliegerstaffeln,* although small numbers were also sent to the ever-expanding *Seenotdienst,* while a select few were retained as instructors. In April 1940, when the Germans launched their invasion of Scandinavia, a major component of the air contingent was transport aviation.

In a country such as Norway, with few paved roads or rail links, it was important that a system be in place to supply German units along some 2,000 kms (1,243 miles) of Norwegian coastline. The only practical way to do this was via air transport. During the planning stages for operations against Norway, '*Weserübung Nord*'[8], two separate commands were thus formed; the *Transportchef Land* [9] for all land-based aircraft and the *Transportchef See*[10] for all transport seaplanes. The latter position was filled by the former *Gruppenkommandeur* of *Küstenfliegergruppe* 106, *Oberst* Ernst-August Roth.

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[4] Air armament schools for maritime aircrew.

[5] German Air Transport School.

[6] Aircrew Replacement Group, Sea.

[7] Aircrew Replacement Battalion 26.

[8] Weser exercise, North.

[9] Chief of Transport Forces – Land.

[10] Chief of Transport Forces – Sea.

Extracts from the interrogation of a 2./*KüFlGr.*406 crew, shot down 28 July 1943

Replacement personnel for 2./406 and for the other coastal units operating flying boats in the Northern Waters are drawn from a reserve unit known as '*Ergängsstaffel See*' at Copenhagen, under the command of a *Hauptmann* Schütt. The present P/Ws were members of this *Ergängsstaffel* from December 1942 until March 1943 and during that period its strength varied considerably. At one time, it was as low as half a dozen crews and at another time, there were as many as thirty. P/W could give no explanation of this fluctuation. New aircraft are drawn from Travemünde and List. They are usually collected by crews of the *Staffel* returning from leave in Germany, but on occasion aircraft have been delivered direct to Trondheim by ferry pilots. There has never been a shortage of aircraft or any difficulty in obtaining replacements.

The reserve depot and records centre for coastal reconnaissance units is at Kamp, on the Baltic, and flying personnel who have left their units for a time owing to sickness or similar reasons are posted to Kamp until once more ready for operations.

To supply the upcoming invasion, Roth ordered the formation of a single bomber wing – *Kampfgeschwader zur besonderen Verwendung* 108[11] – and placed it under the command of a *Hauptmann* Förster. As was standard during the early war period, the *Geschwader* was to include three *Gruppen* comprising eight *Staffeln*. The problem for Roth, however, was the unavailability of seaplanes with which to furnish the entire *Geschwader*. In order to provide a sufficient number of aircraft, Roth was forced to draw all serviceable He 59s from front line units and training establishments. Even then, only 86 aircraft could be found, with just 76 of these being converted for long-range use by the *Geschwader*. The shortfall in He 59s allowed only for the equipping of the 1. through 7. *Staffeln*. In order to bring the unit up to total strength, Roth was forced to turn to the Ju 52/3m (*See*) as a stand-in, some of which were requisitioned from training establishments. Initially, Roth secured ten of these aircraft for transport duties, thereby bringing the *Geschwader* up to its authorised strength. However, on 14 March 1940 the 3. *Staffel*, under the command of *Hauptmann* Schwilden, was withdrawn from the unit and put into special training for operations in the upcoming campaign in the West. As a result, the 3. *Staffel* saw no action during the Norwegian campaign.

Sonderstaffel Schwilden[12]

In preparation for the upcoming summer assault against France and the Low Countries, on 14 March 1940 a specialist seaplane force was formed to fulfil a peculiar, if not especially dangerous, mission. *Sonderstaffel Schwilden* was formed using the He 59 seaplanes that had been allocated to the *3./K.G.z.b.V.108*, itself still in the process of forming up for *Weserübung*. Under the command of *Hauptmann* Horst Schwilden, the *Sonderstaffel* was assigned the special mission of securing the bridges in Rotterdam on the morning of 10 May 1940. Given its specialist role and the immediate role it would play in land battles, the *Sonderstaffel* was placed under the operational command of the 7. *Fliegerdivision*[13] and carried troops of the *11./Infanterie-Regiment* 16 (under the command of *Oblt.* Schrader), which itself was accompanied by 22 sappers of the 2nd *Kompanie* of the Pioneer-Battalion.

On the morning of 10 May 1940, the 12 seaplanes of the unit approached the Willems Bridge over the River Maas. The approach to the target had been worked out so that six aircraft would approach from east and west simultaneously. Landing on the Maas under fire, the soldiers carried aboard the seaplanes were disembarked in an orderly fashion, although under attack. Despite the defence, *Oblt.* Schrader's troops managed to secure the bridge, while at the same time they secured the railroad bridge lying in the vicinity and the Leeuwen and the Jan-Kuiten Bridge.

In total, four of the eight aircraft involved in the operation were destroyed, while the remaining all received damage to varying degrees due exclusively to ground fire. With the conclusion of the operation, *Sonderstaffel Schwilden* was disbanded on 12 May 1940 and the remaining aircraft returned to the *Höhere Fliegerausbildungskommando 2*[14] for distribution to training establishments.

Given the unit's short period of existence, the aircraft retained their *Stammkennzeichen* while no unit crest or identifying marks or symbols are known. In total, four He 59 D seaplanes were written off during the operation, these being W.Nr. 1830, 1995, 2593 and 2599.

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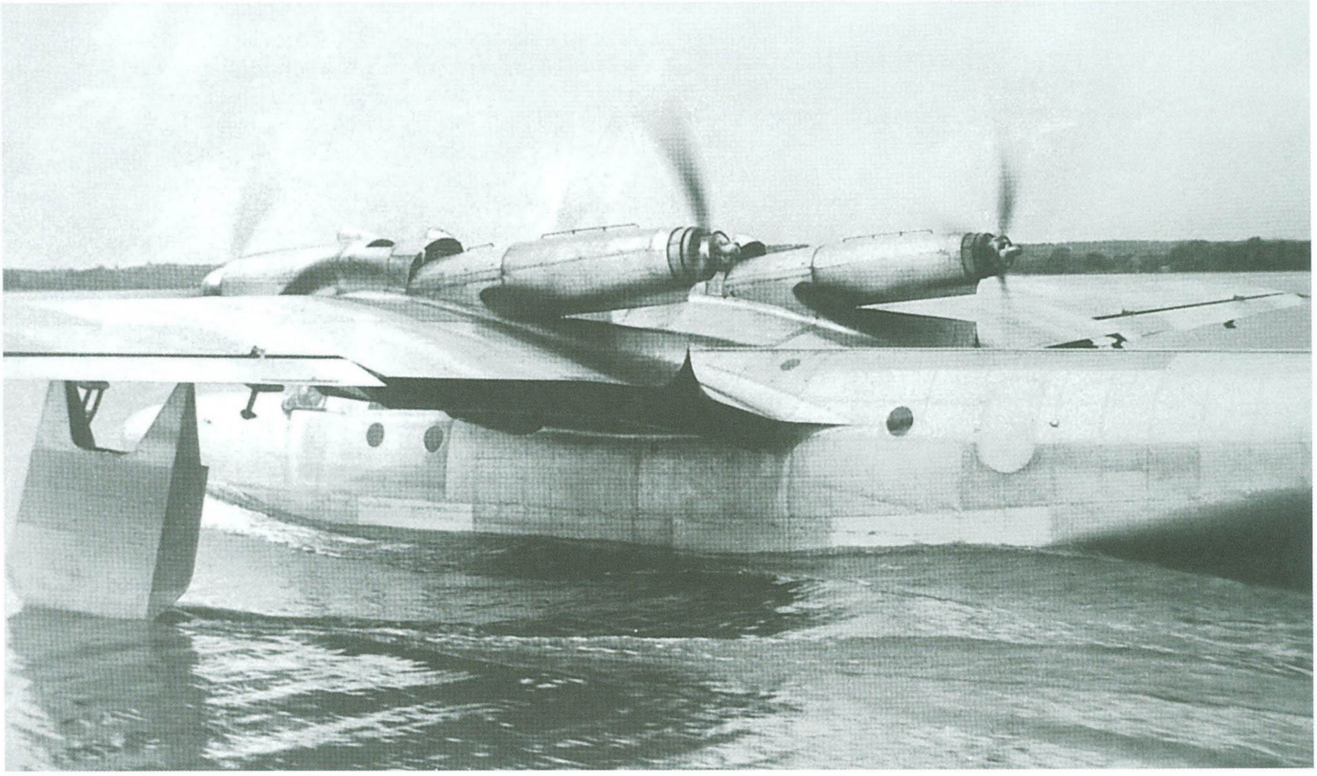
[11] Battle Wing for Special Purposes 108.

[12] Special Squadron Schwilden.

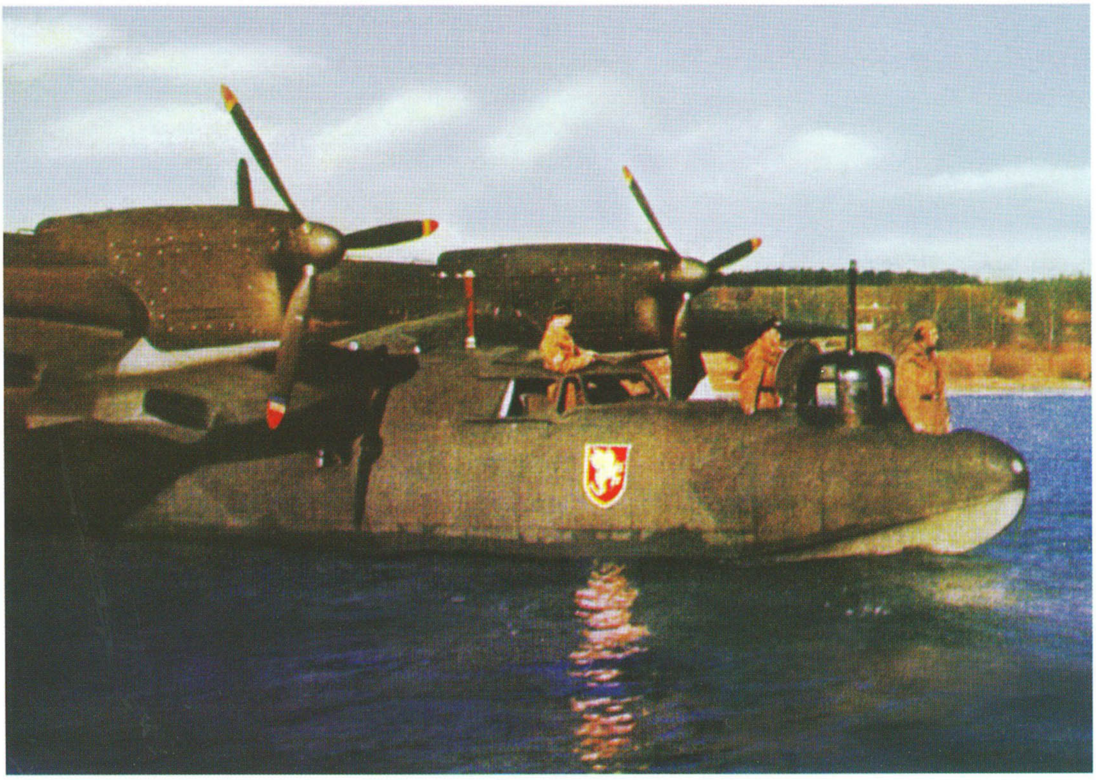
[13] Air Division.

[14] Advanced Flier Training Detachment 2.



The last in a long line of Dornier flying boats, the prototype Dornier Do 26 runs up its four Junkers Jumo 205 D diesel engines and demonstrates how the extended propeller shafts of its aft-mounted engines could be raised 10 degrees to clear water spray during take-off. From the V3 onwards, all remaining Do 26 airframes were armed with a single 20 mm MG 151 cannon in a power operated bow turret, one 7.9 mm MG 15 machine gun in each waist position and a single MG 15 mounted behind a watertight ventral position.

During *Weserübung Nord,* it became increasingly obvious that supplying the German forces, especially those in the besieged town of Narvik, could only be carried out using aircraft. As a result, extra aircraft were allocated to the *Transportchef See* with which to conduct operations. These aircraft included Do 24 and Do 26 flying boats, as well as some early model Bv 138s. On 15 September 1939, a *Sonderstaffel* had been created specifically to carry out very long-range operations. In March 1940, it would be re-formed as the *Trans-Ozean Staffel*[15]. Originally, though, the *Sonderstaffel* was formed under the command of *Hauptmann Freiherr* von Buddenbrock to test and operate the latest long-range naval aircraft that were coming off the production lines; mainly the Do 26 and Ha 139 built by Blohm und Voss. It appears that the first Do 26 was delivered to the unit on 21 September 1939 and the



A colour view of the starboard forward side of a Dornier Do 26 seaplane of the Transozeanstaffel showing the Staffel emblem of a white, winged sea horse on a red shield beneath the cockpit. Formed at Travemünde in March 1940, it operated both the Dornier Do 24 and 26 until it was disbanded and absorbed into KFlGr.406 in March 1941.

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[15] Trans-Ocean Squadron.

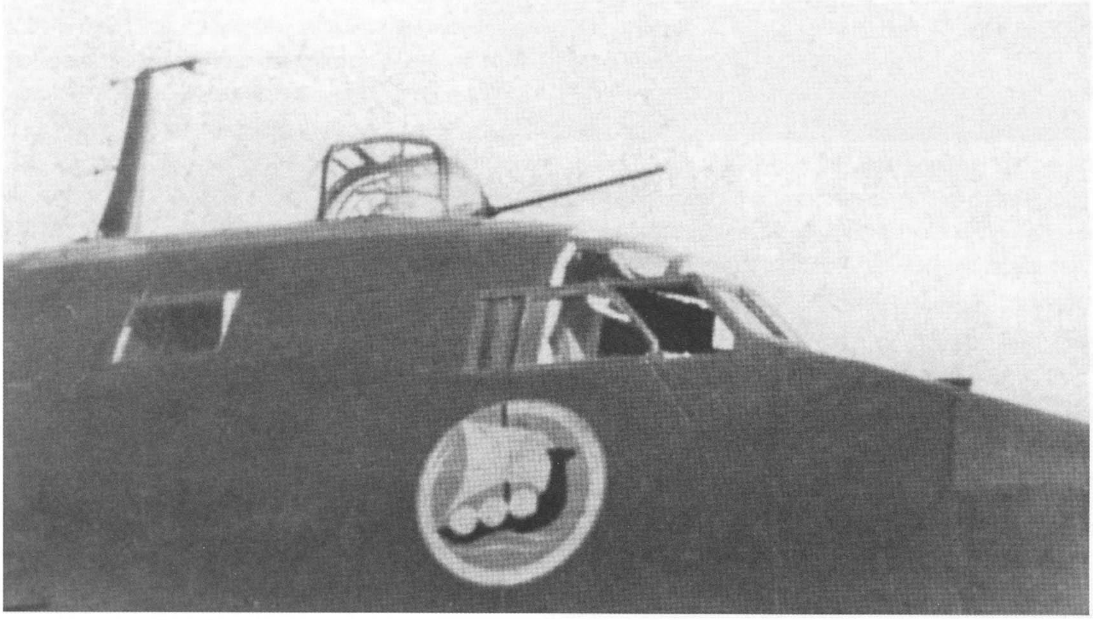
following day a test launch from the catapult ship '*Friesland*' was conducted. On 6 October 1939, the unit received the first of its Ha 139 aircraft, '*Nordsee*', when *Hptm.* Emmerich landed at Travemünde after a 17-hour flight from Las Palmas. Over the next few months, several Do 26 and Ha 139 aircraft were received and both types were tested in a variety of roles.

While neither the Ha 139 nor the Ha 142 were successful as combat aircraft, the six Do 26 flying boats were. As the German occupation of Norway stalled and it became obvious that an increased air transport effort was required – especially to northern Norway and Narvik in particular – the Do 26 aircraft of the *Sonderstaffel* were transferred to *KG z.b.V* 108's command. With a range of some 9,000 km (5,592 miles), the aircraft were ideally suited to the long-range transport requirements of the *Transportchef See*. The problem lay in the small number of these aircraft. Only six had been produced and during the struggle for Norway, three of their number were lost. At the end of the Norwegian campaign, the remaining aircraft were transferred back to the *Trans-Ozean Staffel*, now placed under the tactical command of *Küstenfliegergruppe* 406. However, in February 1941, the unit was disbanded, its personnel dispersed throughout the various *Staffeln* of *KflGr.*406 and its aircraft returned to Germany.

KG z.b.V 108 was not the only transport unit to utilise seaplanes or flying boats during the war. In 1937, the Deutsche Lufthansa had announced a need for a transcontinental passenger aircraft. While Heinkel and Dornier both submitted designs, the most promising draft came from Blohm und Voss with a six-engined flying boat. Awarded a contract, Blohm und Voss began construction on what would become the Bv 222 V1 in August 1938. Work on the V2 and V3 followed soon after. However, with the outbreak of war, production was slowed as the company refocused its attention to production of the Bv 138. As a result, it was not until August 1940 that the V1, wearing the civil registration D-ANTE, was ready for trials, with the aircraft making its maiden test flight on 7 September 1940. Although the flight characteristics were said to be satisfactory, there was a supposed tendency to instability both in the air and on the water.

With the icing over of the Elbe during the winter of 1940, testing was halted. When the tests recommenced in 1941, it was decided to save valuable fuel by testing the aircraft whilst employed operationally. As a result, the aircraft received a standard seaplane camouflage and the four-letter *Stammkennzeichen*[16] CC + EQ. From then until 19 August 1941, the aircraft performed seven supply flights to Kirkenes in the extreme north-east of Norway, carrying 65 tons of goods and retrieving 221 wounded soldiers. During these flights, the aircraft flew in excess of 30,000 km (18,641 miles).

After scheduled maintenance in Hamburg, the aircraft was transferred to Athens in order to continue its transportation tasks in the Mediterranean. Flying between Derna and Athens, between 16 October and 6 November 1941 30 tons of supplies and 515 injured soldiers were ferried to and from North Africa. However, as the aircraft was unarmed, it required constant escort, usually from the Messerschmitt Bf 110 heavy fighters of *Zerstörergeschwader 26*[17].



A close-up view of the emblem carried by the Bv 222s of LTS See 222, which consisted of a black and white Viking longship, superimposed on a blue-bordered, light blue disc.

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[16] Factory Registration Code.

[17] Destroyer Wing 26.

This Dornier Do 24 was found abandoned and partially stripped in Schleswig-Holstein in early 1945. Carrying the codes A3+EE which identify it as being on the strength of KG 200, it is just one example of the extensive variety of aircraft operated by this Gruppe throughout its operational life.

During the winter of 1941, the Bv 222 V1 was again overhauled in Hamburg, where the *Verbandskennzeichen*[18] of X4+AH was applied and an armament of one MG 131 in a dorsal turret, an MG 81 in a nose station and four MG 81 in lateral stations, were installed. Thus overhauled, the aircraft returned to the Mediterranean where it formed the nucleus of the *Lufttransportstaffel See 222*[19]. The second and third aircraft, coded X4+BH and X4+CH respectively, similarly joined *LTS See 222* during late 1941.

During 1942, more Bv 222s were sent to the Mediterranean to serve with *LTS See 222* in the transport role. However, by the end of the year, the unit was suffering increasing interceptions and thus losses. On 22 November 1942, Bv 222 V6, coded X4+FH, was seen by F/O Coate of 272 Squadron when flying 48 km (30 miles) from Linosa. Coate attacked the lumbering flying boat from the beam, having dived out of the sun. His first burst blew large pieces out of the fuselage, with the second burst setting the three port engines and fuel tank on fire. Losing height, the aircraft hit the sea, whereupon it bounced some 18 m (60 ft) into the air before dropping its left wing in a half roll and blowing up as it hit the sea for a second time. Less than a month later, on 10 December 1942, Bristol Beaufighters of 227 Sqn RAF intercepted three Bv 222s (the V1, V4, and V8) of *LTS See 222*. F/Lt. Rae successfully attacked and brought down X4+HH, the Bv 222 V8, on board of which was *Ritterkreuzträger*[20] *Hptm.* Wolf-Dietrich Peitsmayer, en route to join the I./*Schlachtgeschwader* 2[21] in Tripolitania.

Despite the vulnerability of these aircraft, the main reason for these losses was that *LTS See* 222 operated on specific air routes at specific times. All that an Allied airman needed for an interception to take place were clear weather and a watch. These losses, and pressing demands elsewhere for long-range transports and air-sea reconnaissance aircraft, saw four other Bv 222s transferred out of *LTS See 222* during 1943. By mid-1943, and the war in North Africa all but over, the Bv 222s of *LTS See 222* were transferred to Europe for service with other units.

As only a limited number of Bv 222 transport aircraft was available, during May 1943 *KG.z.b.V* 108 was redesignated as *Transportgruppe* 20[22], though by now it had converted entirely to the Ju 52. Maintaining its base of operations in Norway, the unit continued to ferry supplies and men around the Northern theatre of operations. In October 1943, it was joined by *Seetransportstaffeln* 2 and 3[23], which had been raised at that time. As with *Seetransportstaffel* 1 in the Mediterranean, these three new transport units all relied on the Junkers Ju 52 seaplane. Of the three, though, only the *Seetransportstaffel* 2 survived to the end of the war, the others being disbanded in October 1944 and their equipment and personnel being sent on to other units.

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[17] Destroyer Wing 26.

[18] Operational Unit Code.

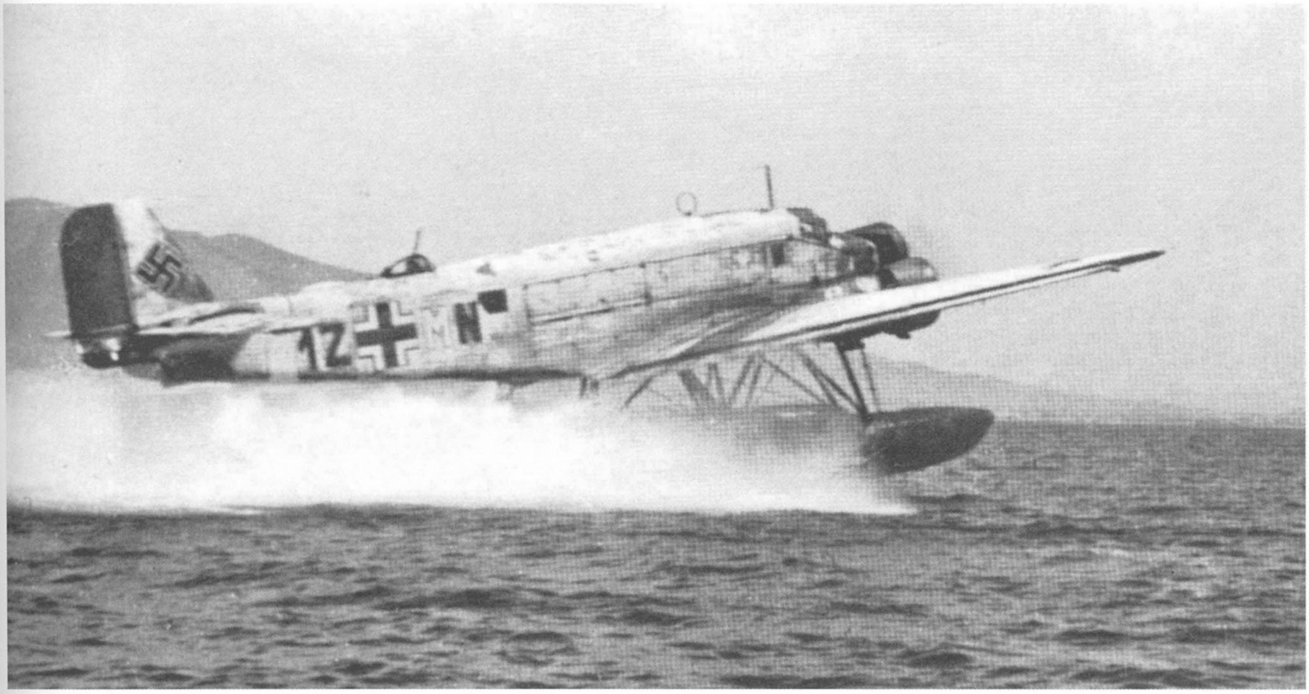
[19] Air Transport Squadron Sea 222.

[20] Knights Cross holder.

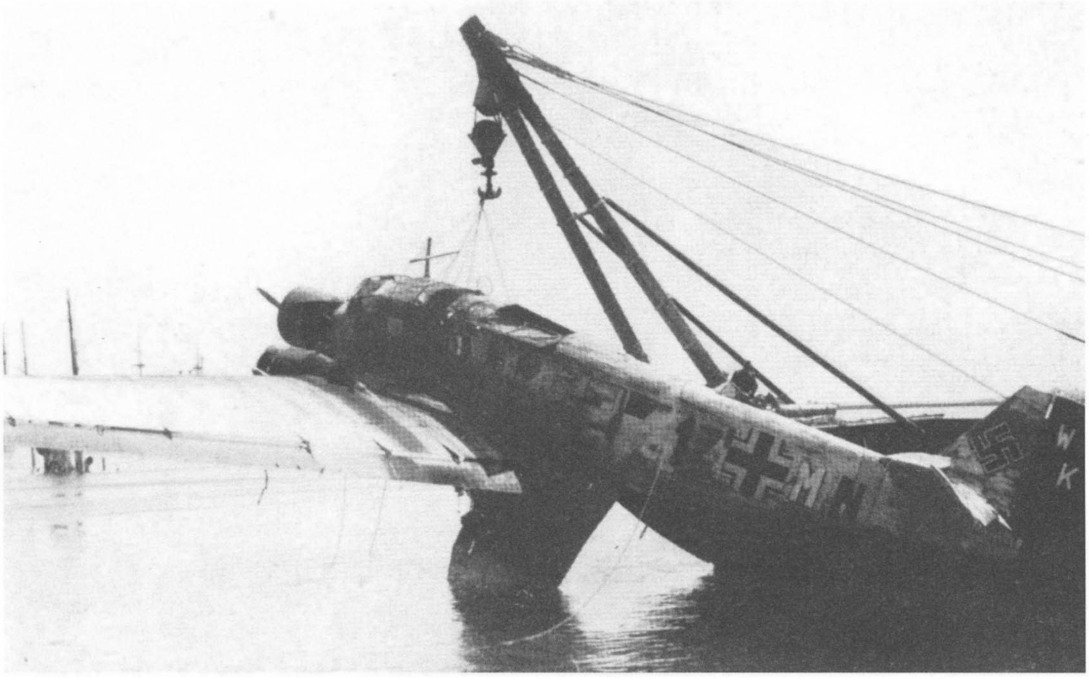
[21] I. *Gruppe* of Close support/Ground Attack Wing 2.

[22] Transport Group 20.

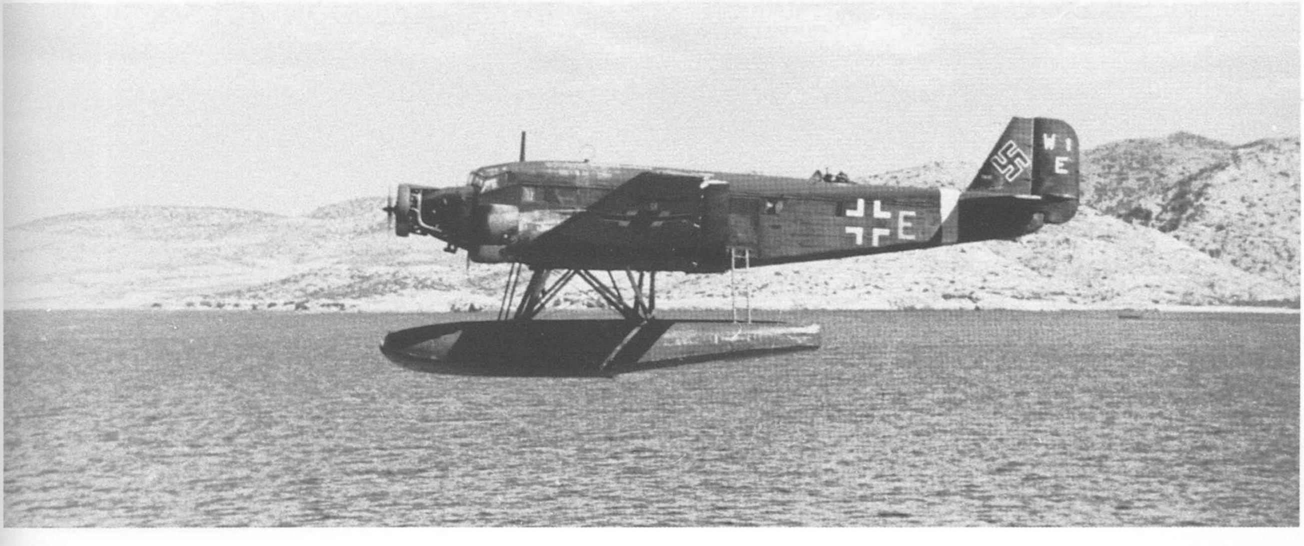
[23] Sea Transport Squadrons 2 and 3.



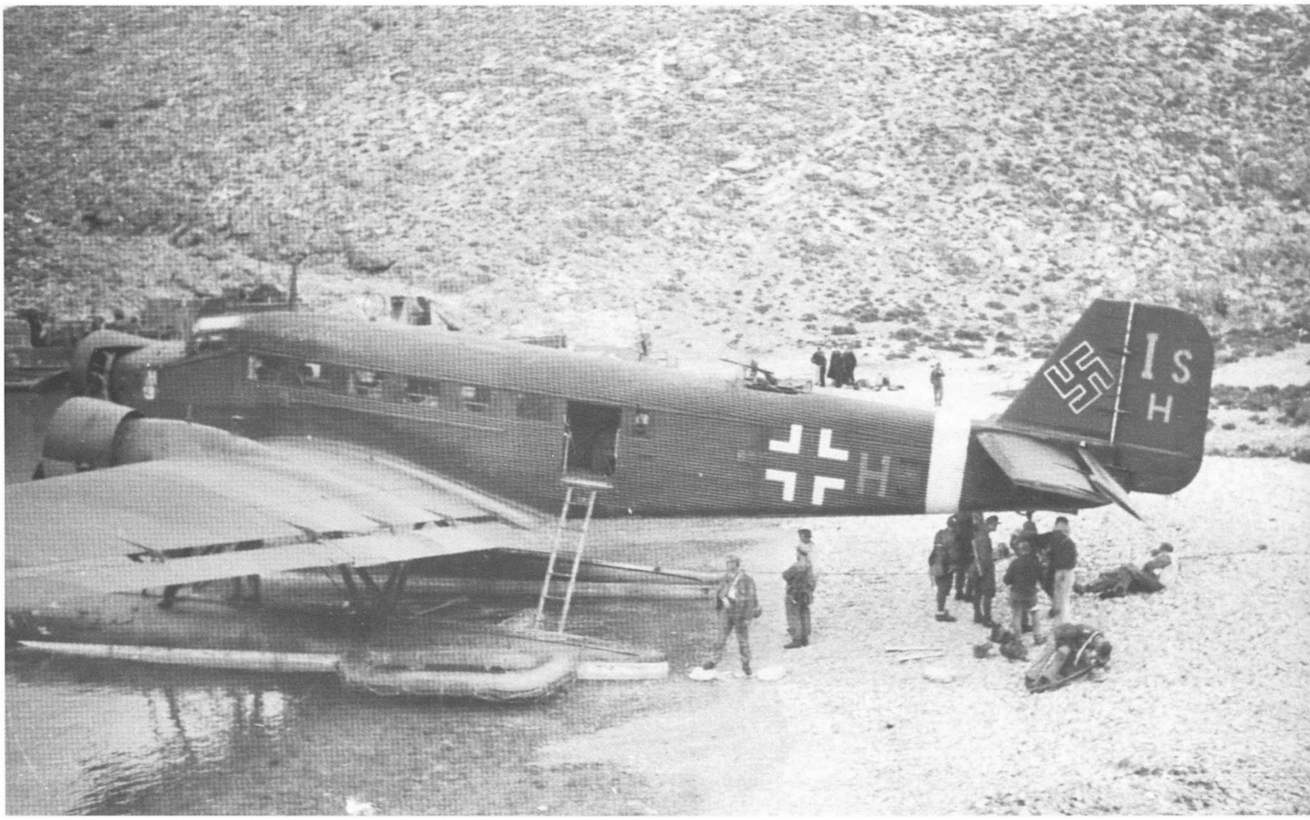
Still with the temporary winter camouflage of the Eastern Front, Ju 52/3mg5e (See) coded 1Z+MN of the 5./TG 1 is seen here during take-off for a supply mission in the Aegean Sea during 1943. In May 1943, the Transport Gruppen were reorganized and five new Transport Geschwader were created by combining most of the existing KGrzbV units with others renamed as either Transport Gruppen or Staffeln, dependent on their size. Unlike the standard Staffel colour coding used by other flying units of the Luftwaffe, beginning in 1943 the colours used by the Transport Geschwader were different because they were each composed of four Gruppen, with four Staffeln in each Gruppe; the colours used were White for the 1, 5, 9 and 13 Staffeln, Red for the 2, 6, 10 and 14 Staffeln, Yellow for the 3, 7, 11 and 15 Staffeln and Blue for the 4, 8, 12 and 16 Staffeln.



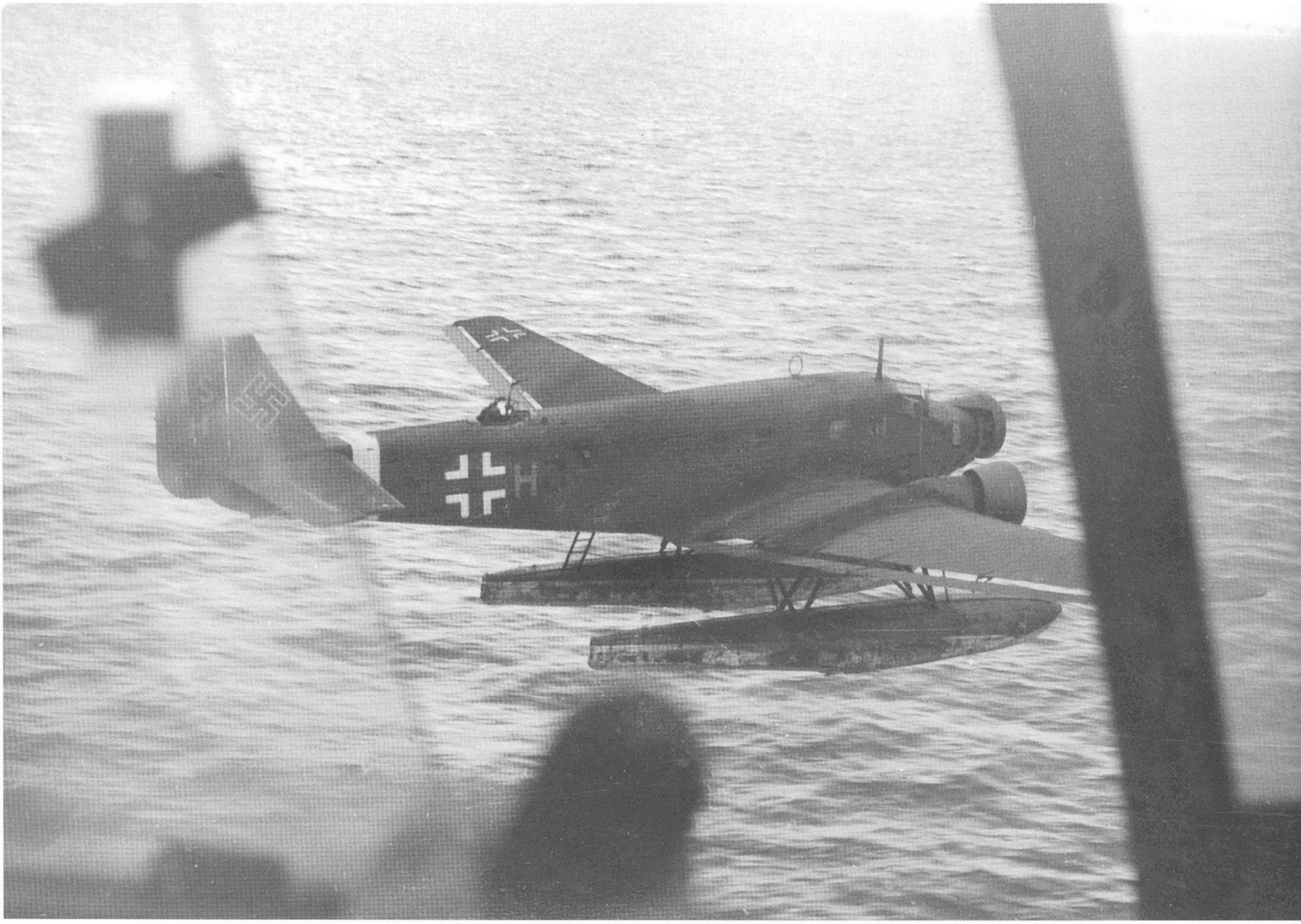
Right: An undated photograph showing the previously illustrated Ju 52 being recovered from the harbour at Athens in 1943 after crashing during take-off. Of interest and not shown in the preceding photograph, 1Z+MN now carries a partially visible tactical code on the rudder consisting of the letters 'W' and 'K' the meaning of which, at the present time, is unknown.

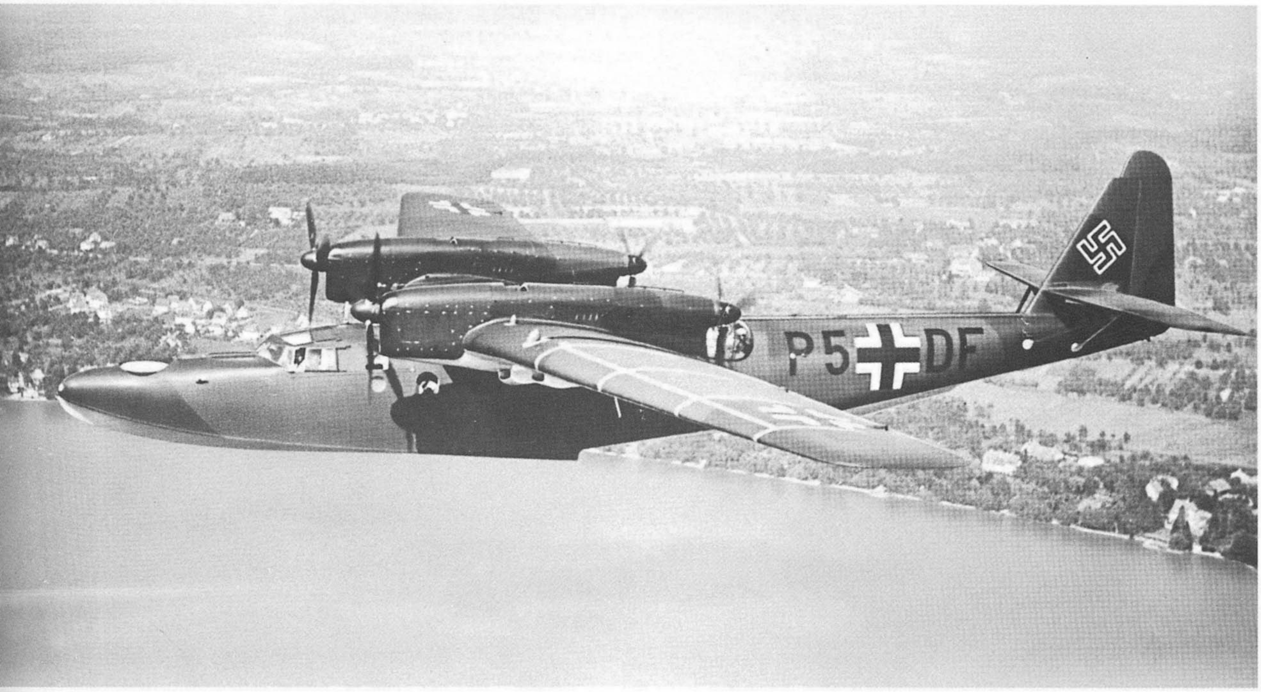


A Junkers Ju 52/3mg5e (See) of KGrzbV Wittstock cruises along the Aegean coastline during the summer of 1943. The tactical code of W 1 E painted on the rudder represents as follows: 'W' for the unit identity, the figure '1' for the 1.Staffel with the letter 'E' being the individual aircraft letter.

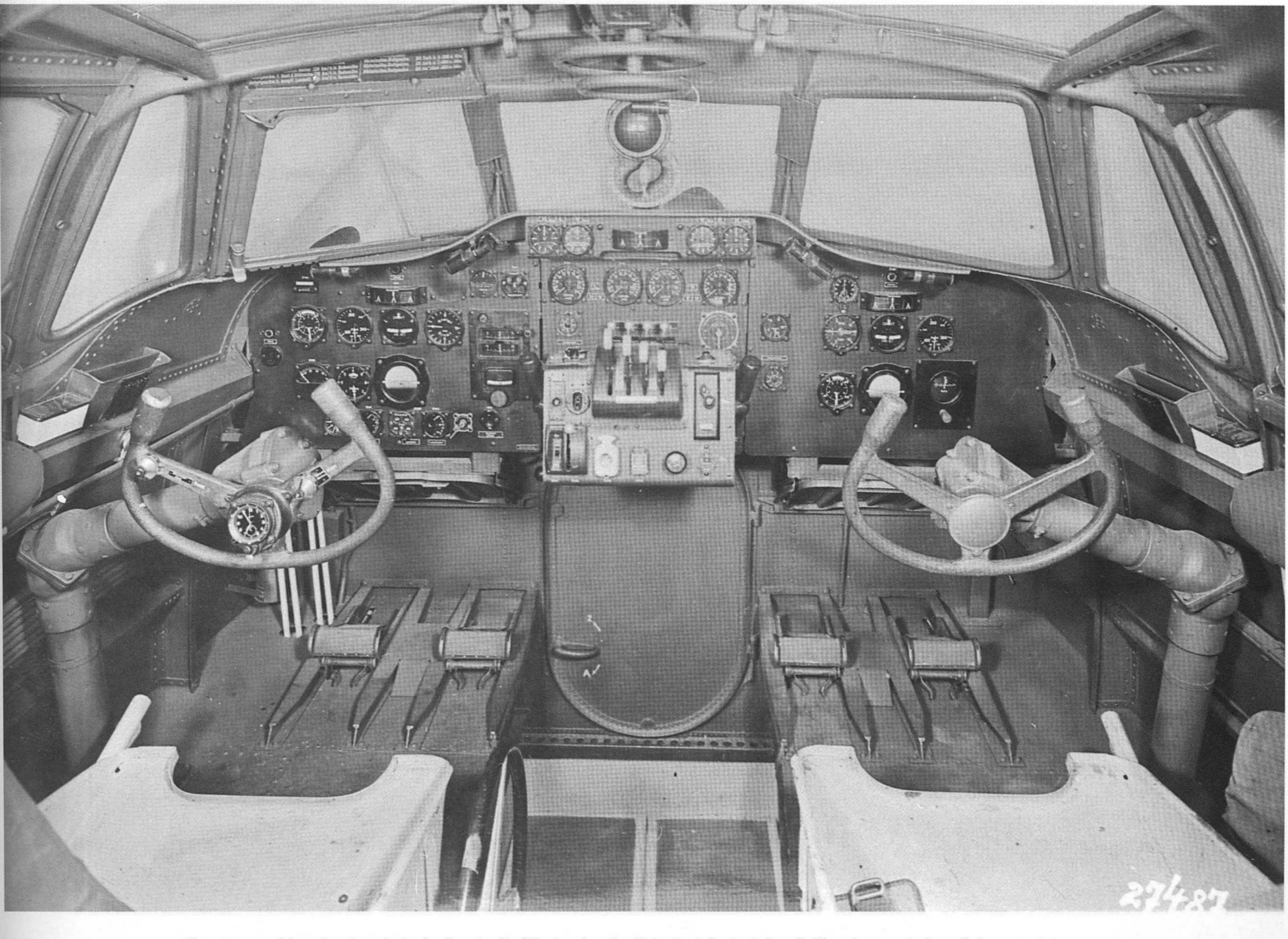


Two views of a Lufttransportstaffel (See) Junkers Ju 52/3mg5e (See) show the tactical marking of ISH applied to both sides of its rudder. While the 'S' identifies a Lufttransportstaffel (See) unit and the 'H' the individual aircraft letter, the significance of the letter 'I' is currently unknown.

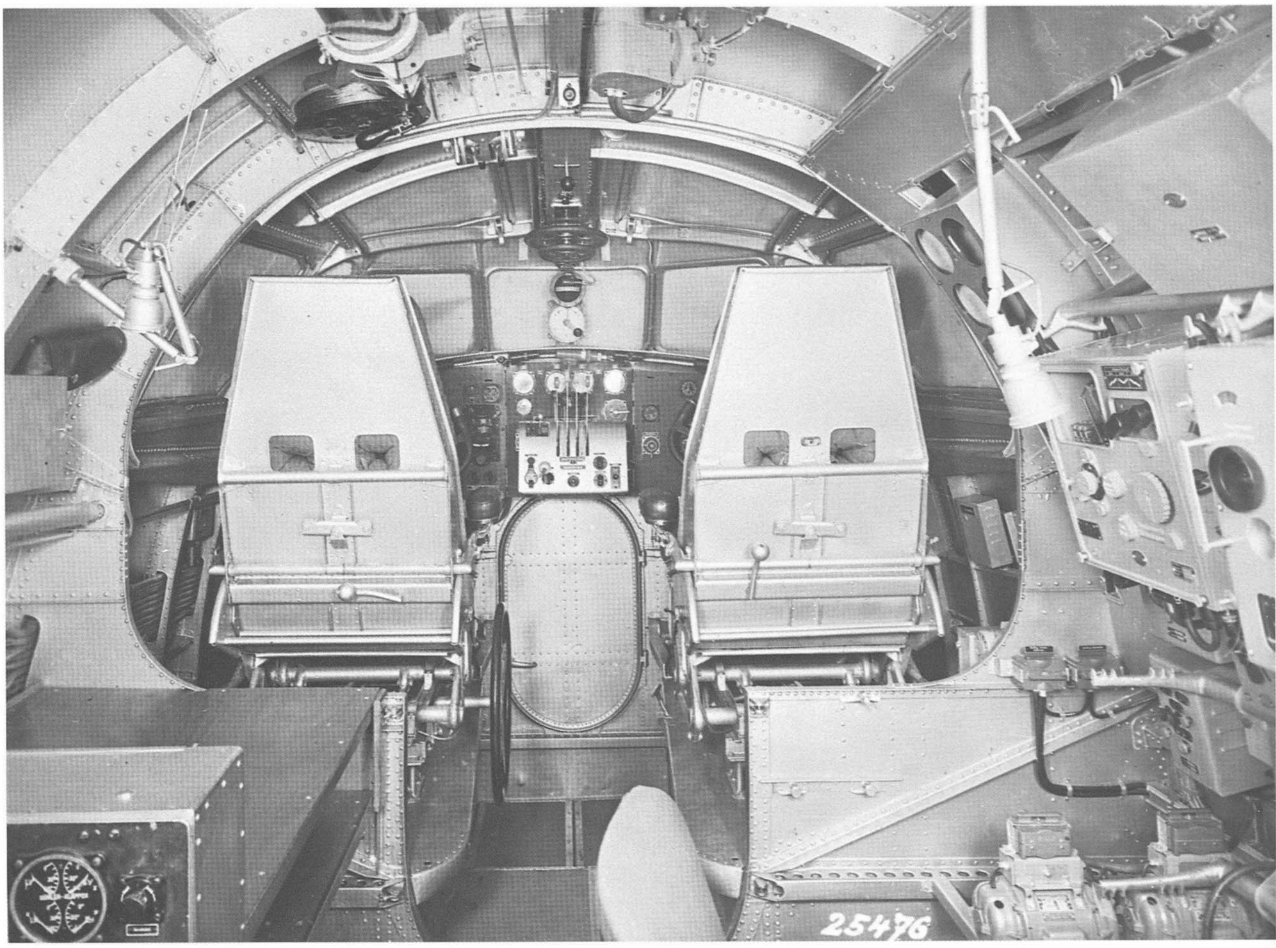




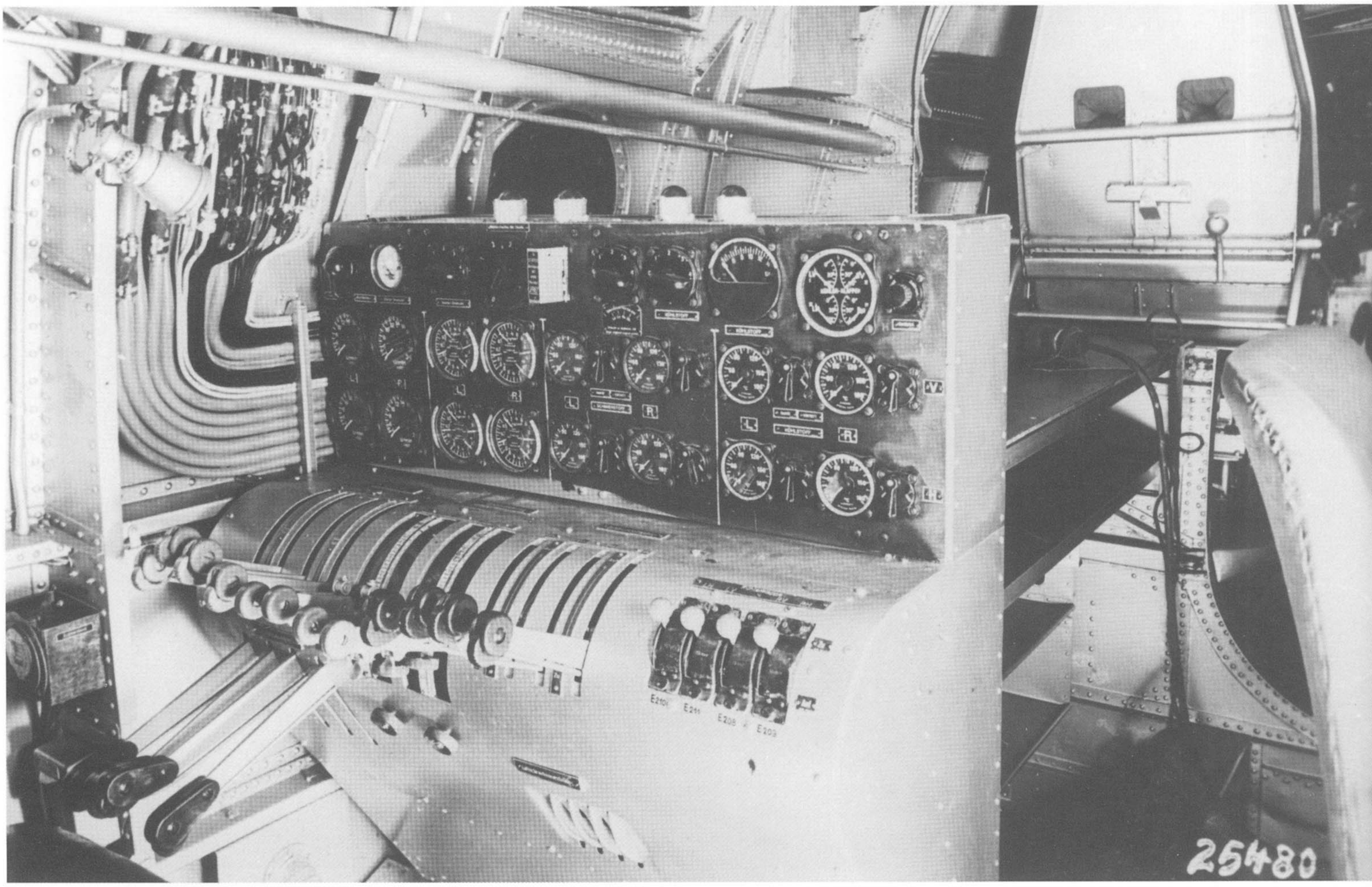
The Dornier Do 26 V4, coded P5+DF while serving with the Sonderstaffel Trans-Ozean (Special trans-ocean squadron).



The clean and functional cockpit of a Dornier Do 26, showing the flight deck for both first (left) and second pilots. Only essential engine instruments are located here (forward of the throttles) as behind the pilot sat the flight engineer with a much larger set of instruments and throttles (see following page). Note the bow access door below the throttle pedestal and the clock in the centre of the pilot's control yoke.



Moving aft within the forward cockpit of the Dornier Do 26, we have the radio operator's position to the right, with a chart table directly behind him. To the left is the flight engineer's position (below), which is comprehensively equipped.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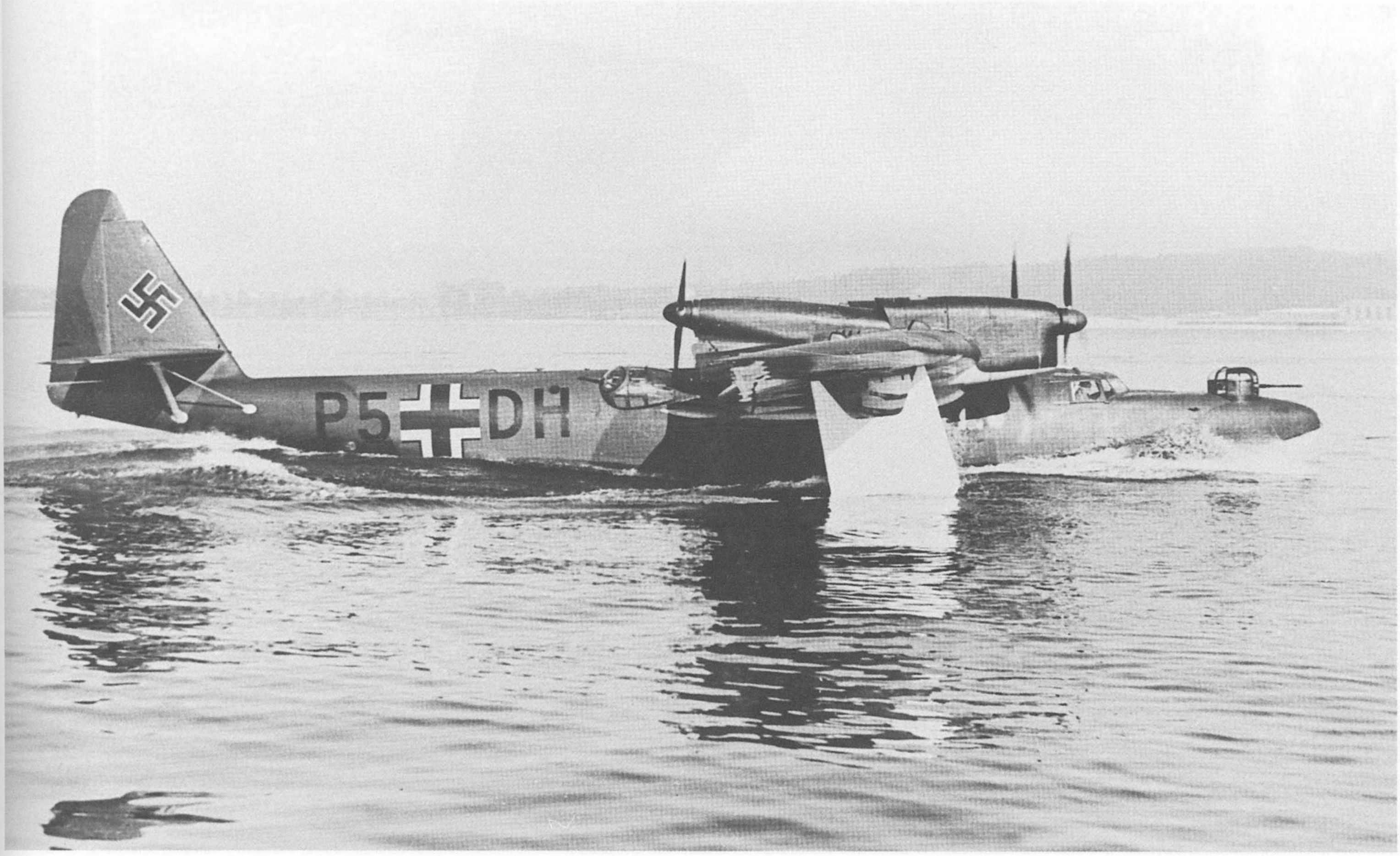
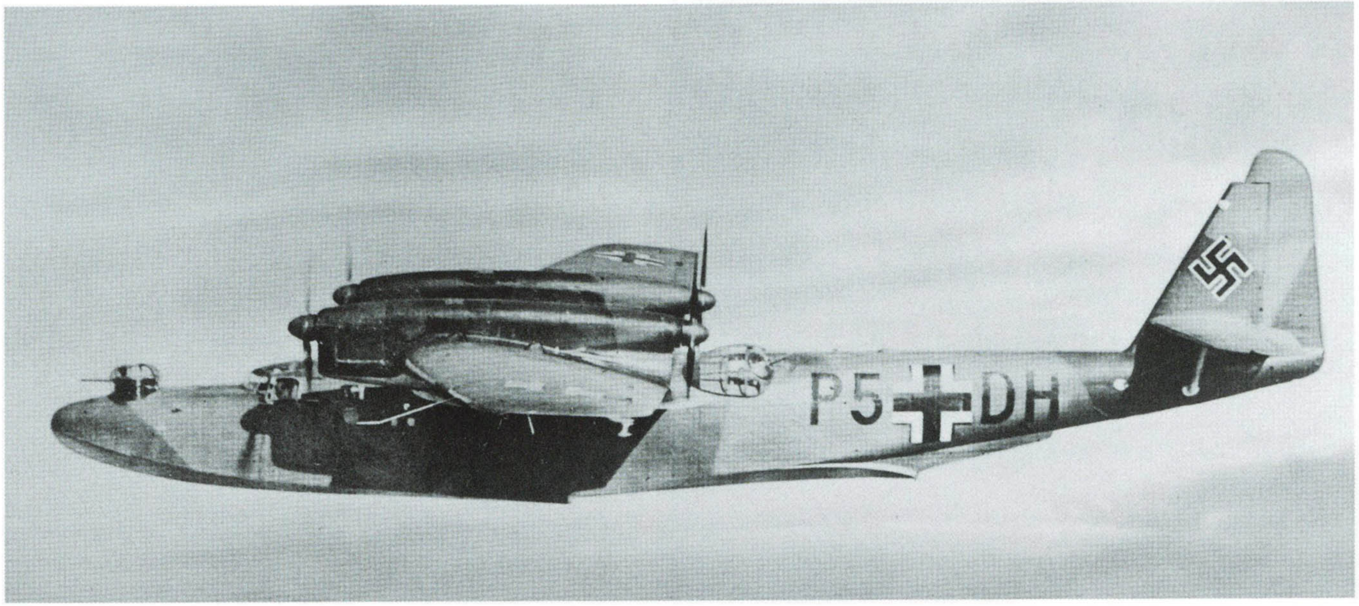
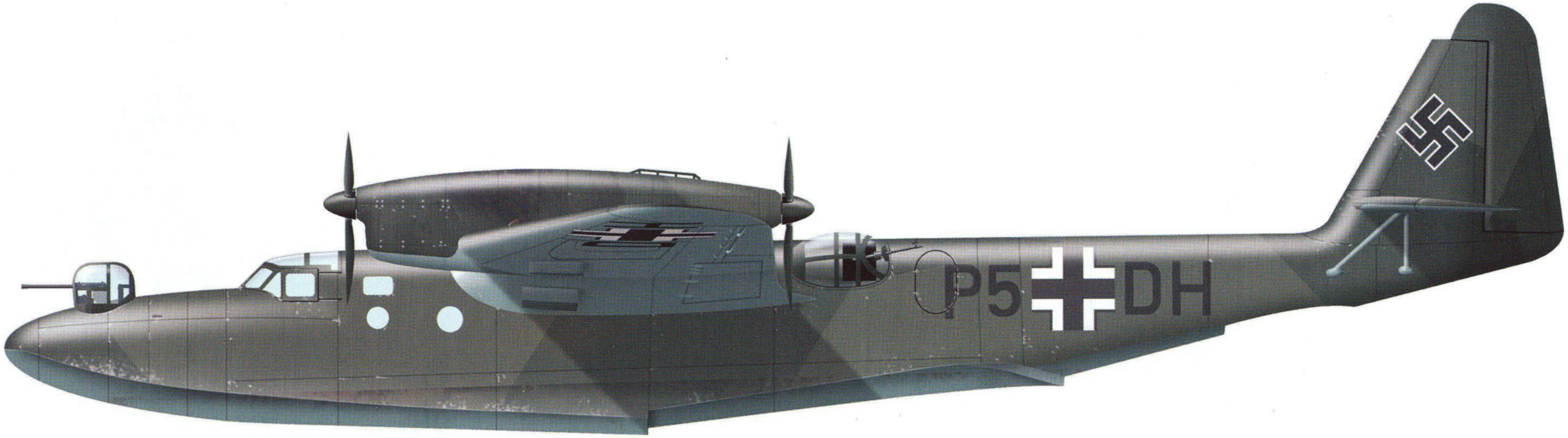


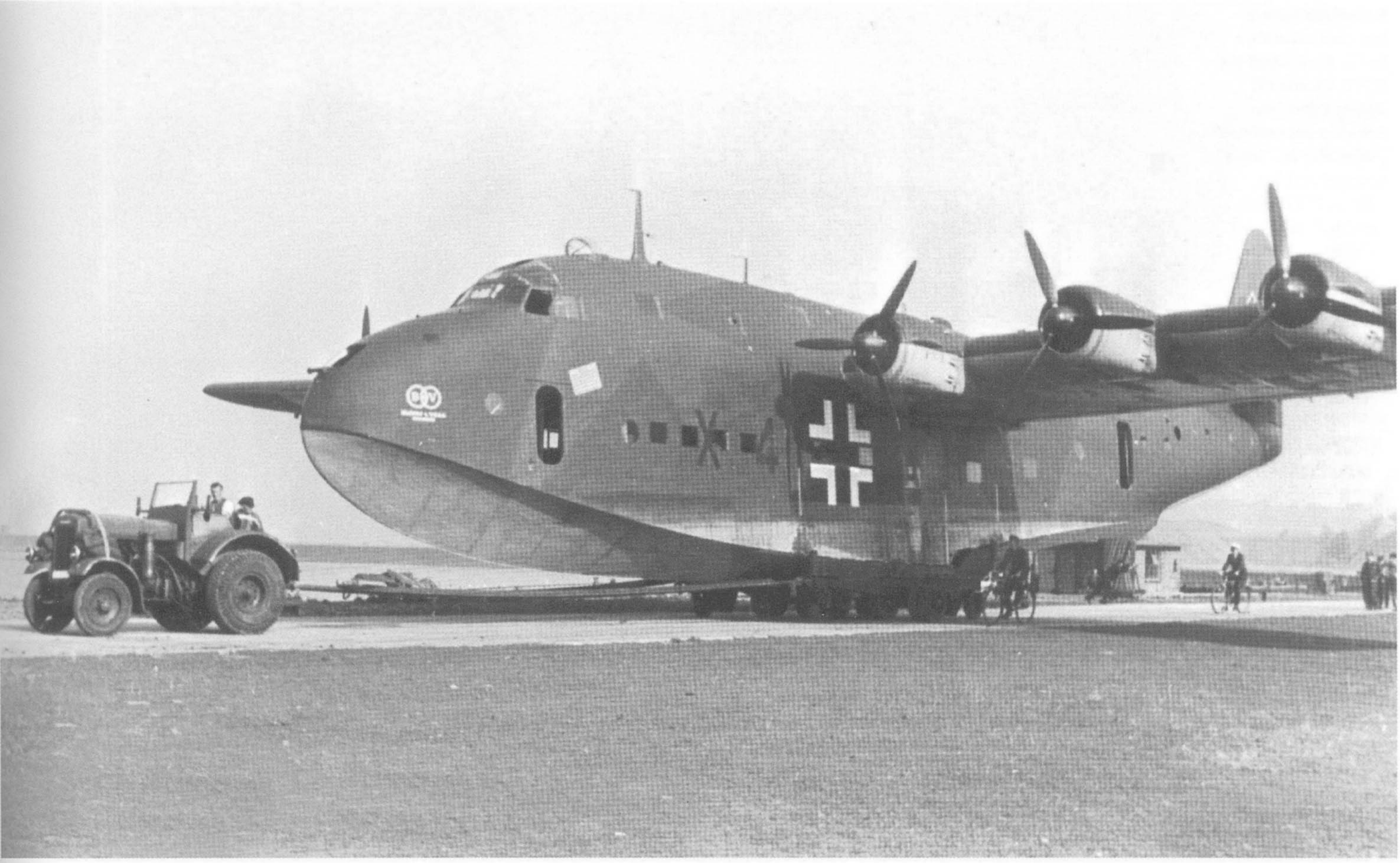
Dornier Do 26 V6, seen here coded P5+DH, was the last example of this aircraft to be built. Shortly after RAF Hurricane fighters caught and destroyed the V1 and V2 in a Norwegian fjord on 28 May 1940, the surviving Do 26s were withdrawn from front line service and relegated to communications duties until increasing servicing difficulties necessitated their retirement.

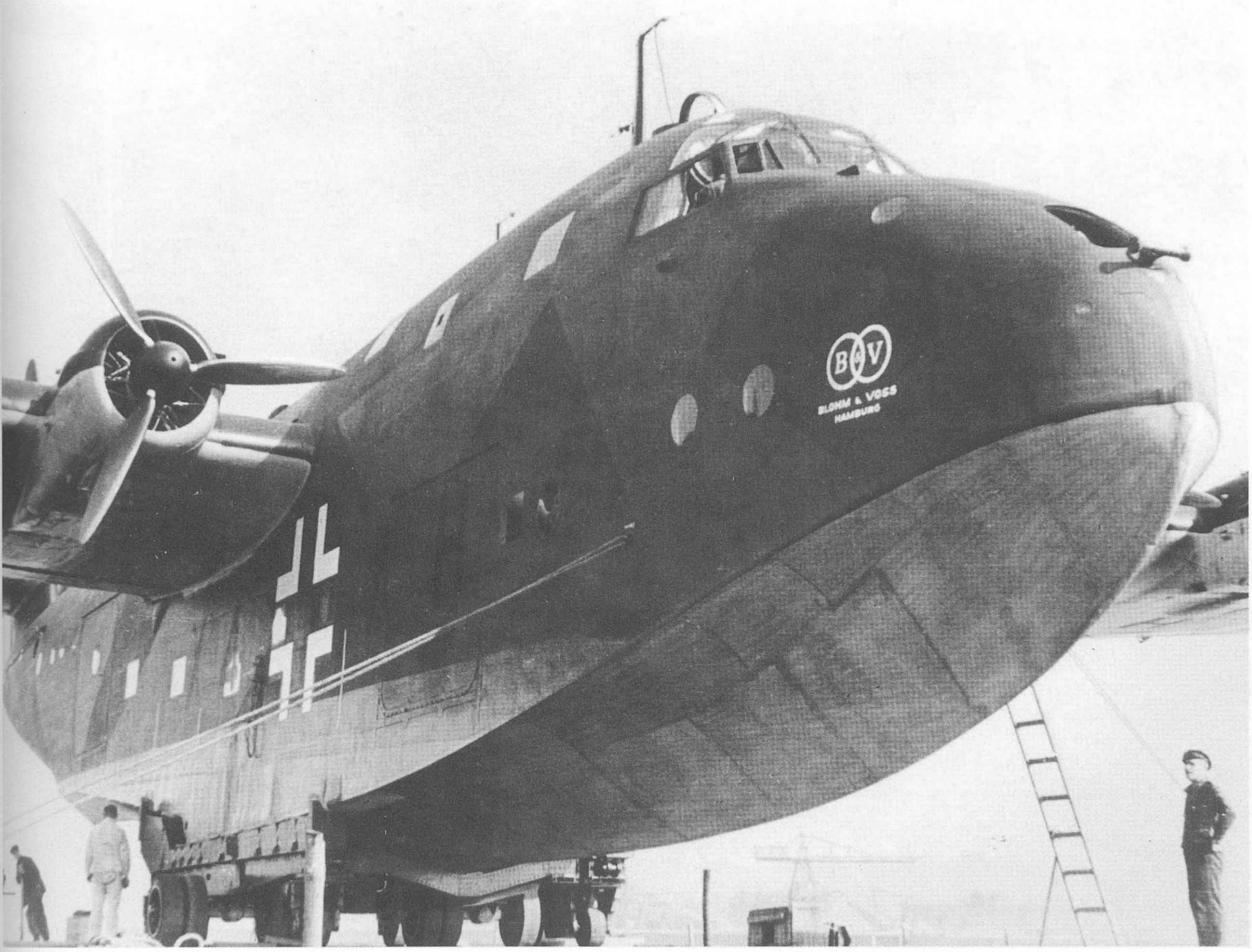




Dornier Do 26 V6 P5+DH, Sonderstaffel Trans-Ozean circa 1940

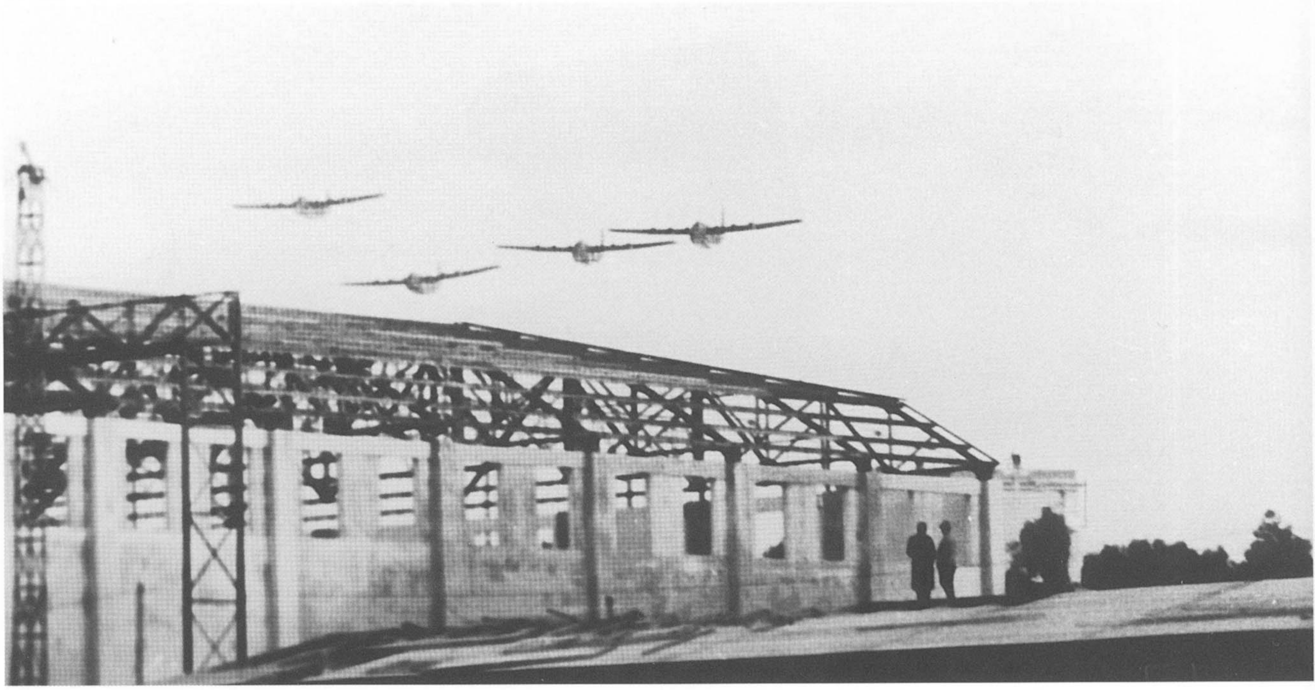
As with the majority of aircraft in Luftwaffe maritime service, the Do 26 V6 is camouflaged in the greens 72 and 73 with 65 blue under surfaces with the national insignia in the eight standard positions on wings, fuselage and fin and it carries the Sonderstaffel Trans-Ozean Verbandkennzeichen of P5+DH in black along both fuselage sides.



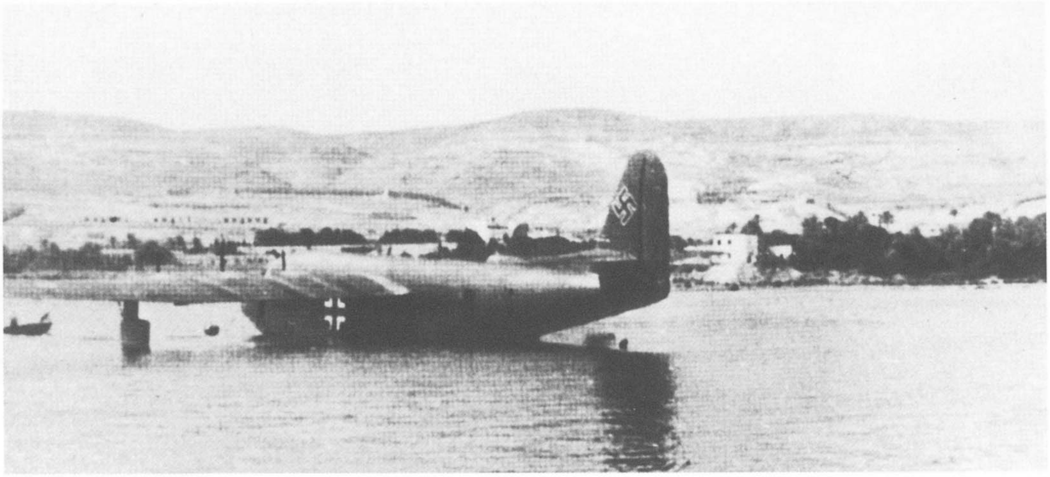


Previously registered as D-ANTE, W.Nr.365, this view of the Blohm und Voss Bv 222 V1 is understood to have been taken at Finkenwerder in late 1941 shortly after arriving there for servicing. Given the Stammkennzeichen of CC+EQ, it was later coded X4+AH as seen in the accompanying photograph. It was lost in a landing accident in Athens harbour in February 1943.

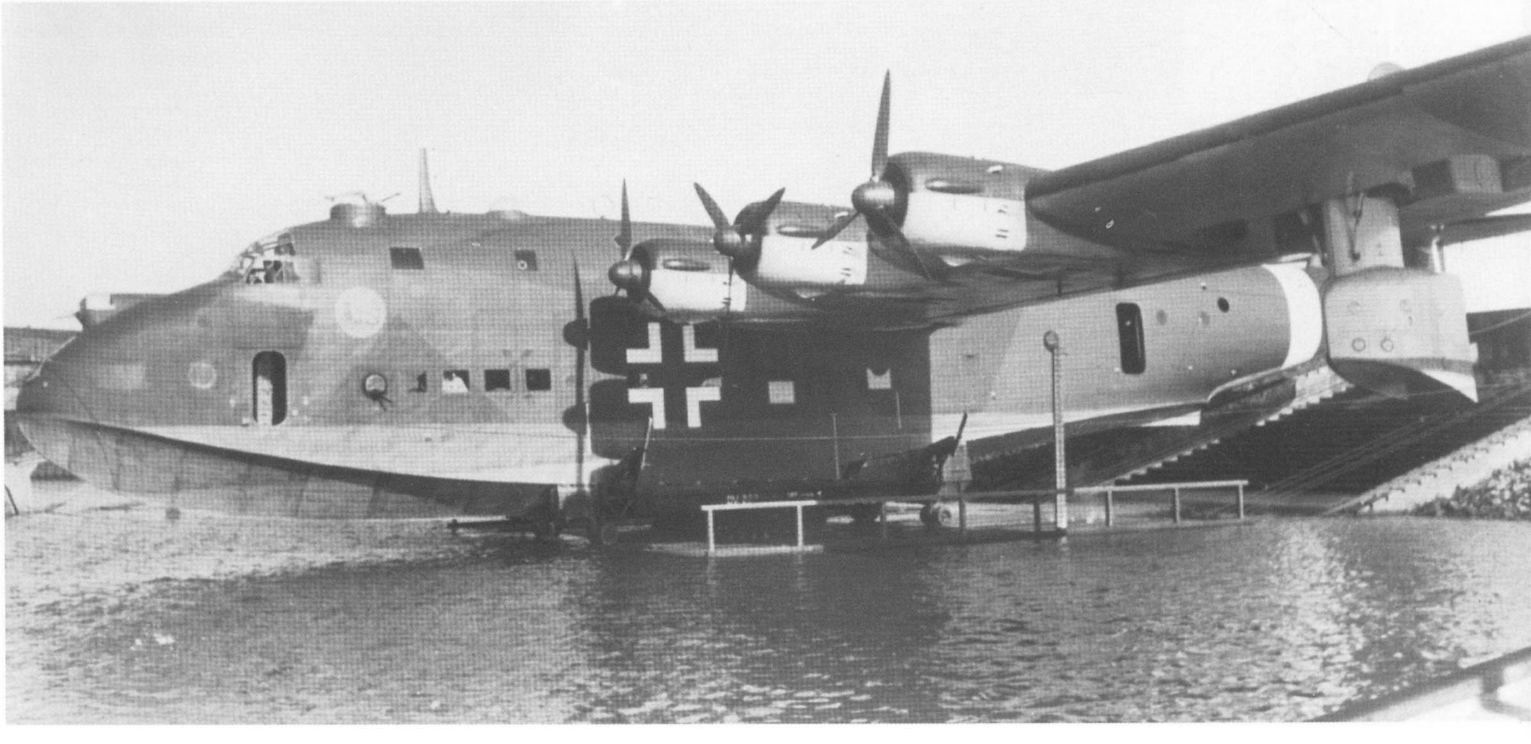
The immense size of the Bv 222 is readily apparent in this second view of X4+AH sitting on its transportation dolly at Finkenwerder in late 1941. Clearly visible on the nose is the Hamburg-based Blohm und Voss company logo of interlinked circles containing the initials B and V.

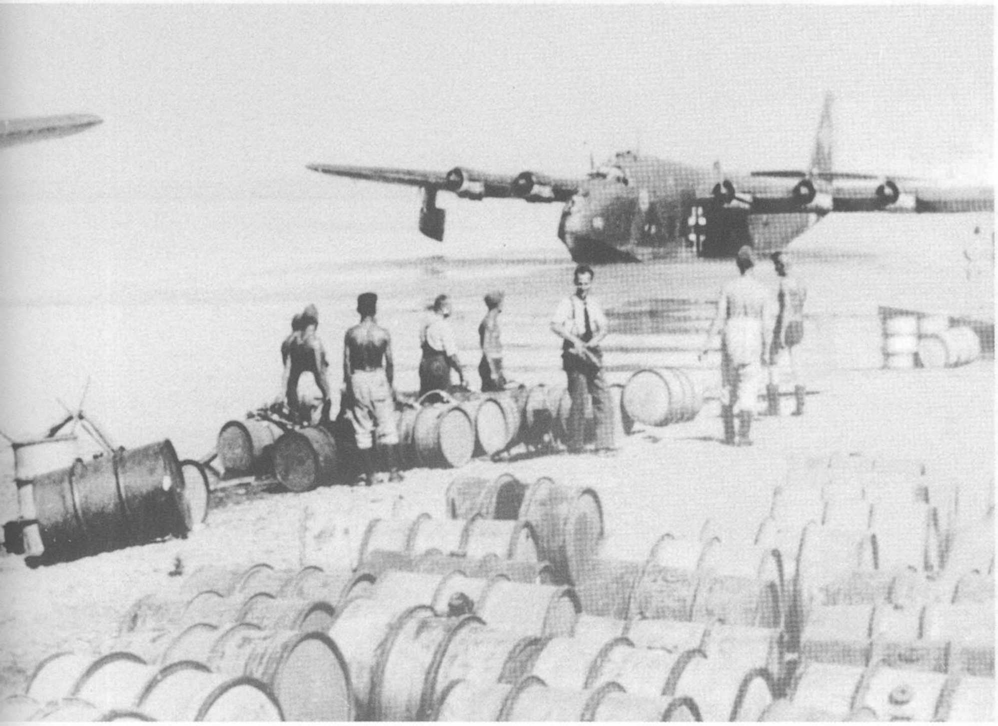


An undated view of four Blohm und Voss Bv 222 As (possibly the V1, V2, V3, and V4) making a low-level formation pass over an unidentified and bomb-damaged building. If the six 323R-2 nine-cylinder Bramo Fafnir radial engines of a single Bv 222 were considered somewhat noisy in flight, then the noise produced by twenty-four together in a low-level formation would have been a memorable experience.

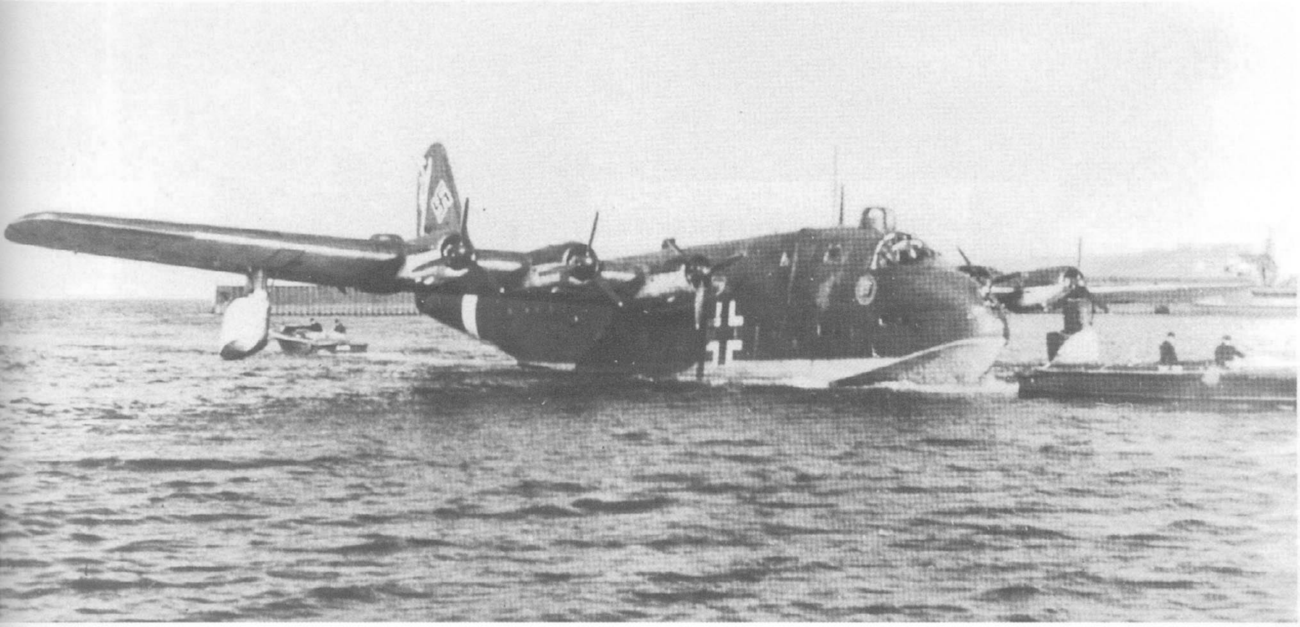


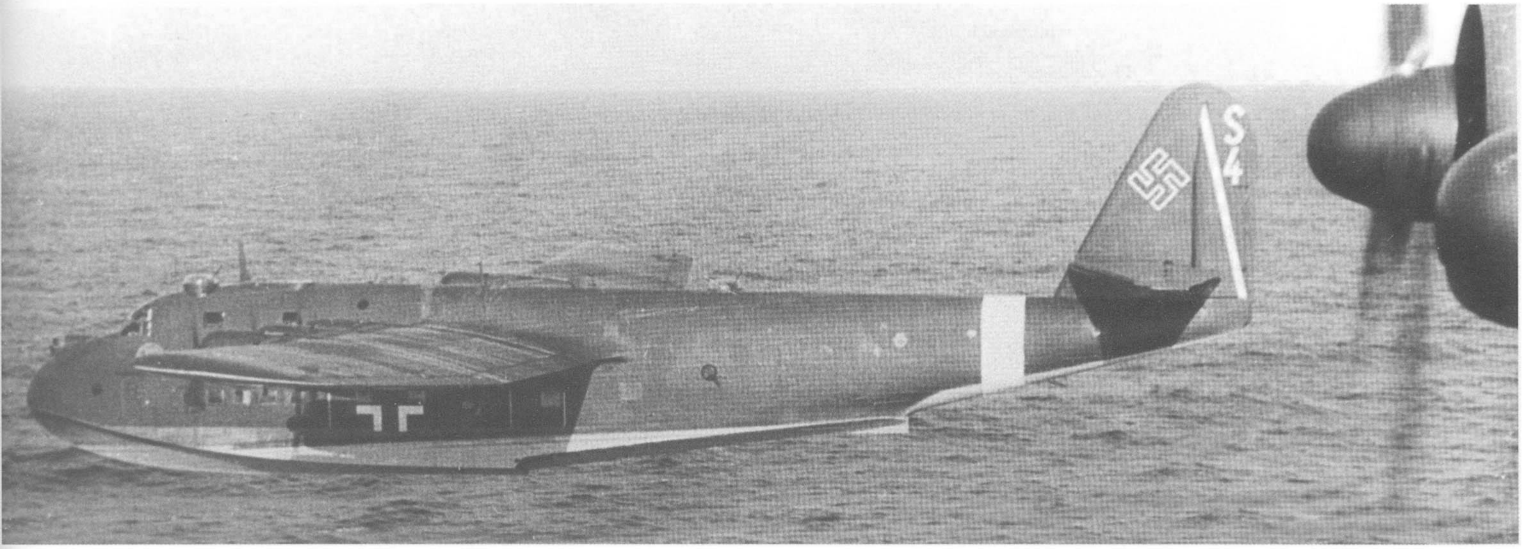
The Bv 222 V7, TB+QL, W.Nr.310007, viewed from the rear port quarter while moored at an unidentified Mediterranean location. This aircraft was the prototype for the Jumo 207C diesel-engined C-series and wore the Verbandkennzeichen of X4+GH.

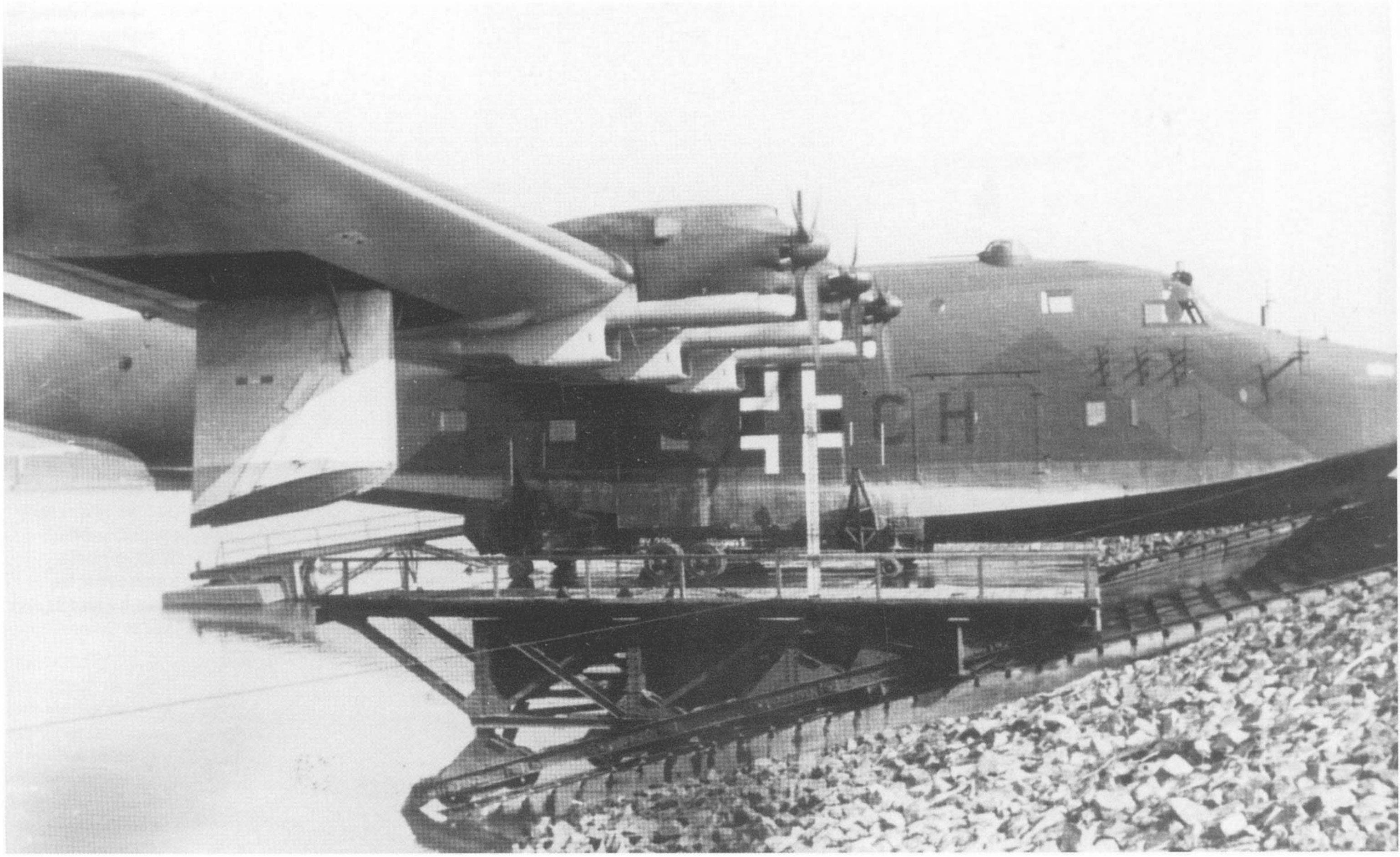




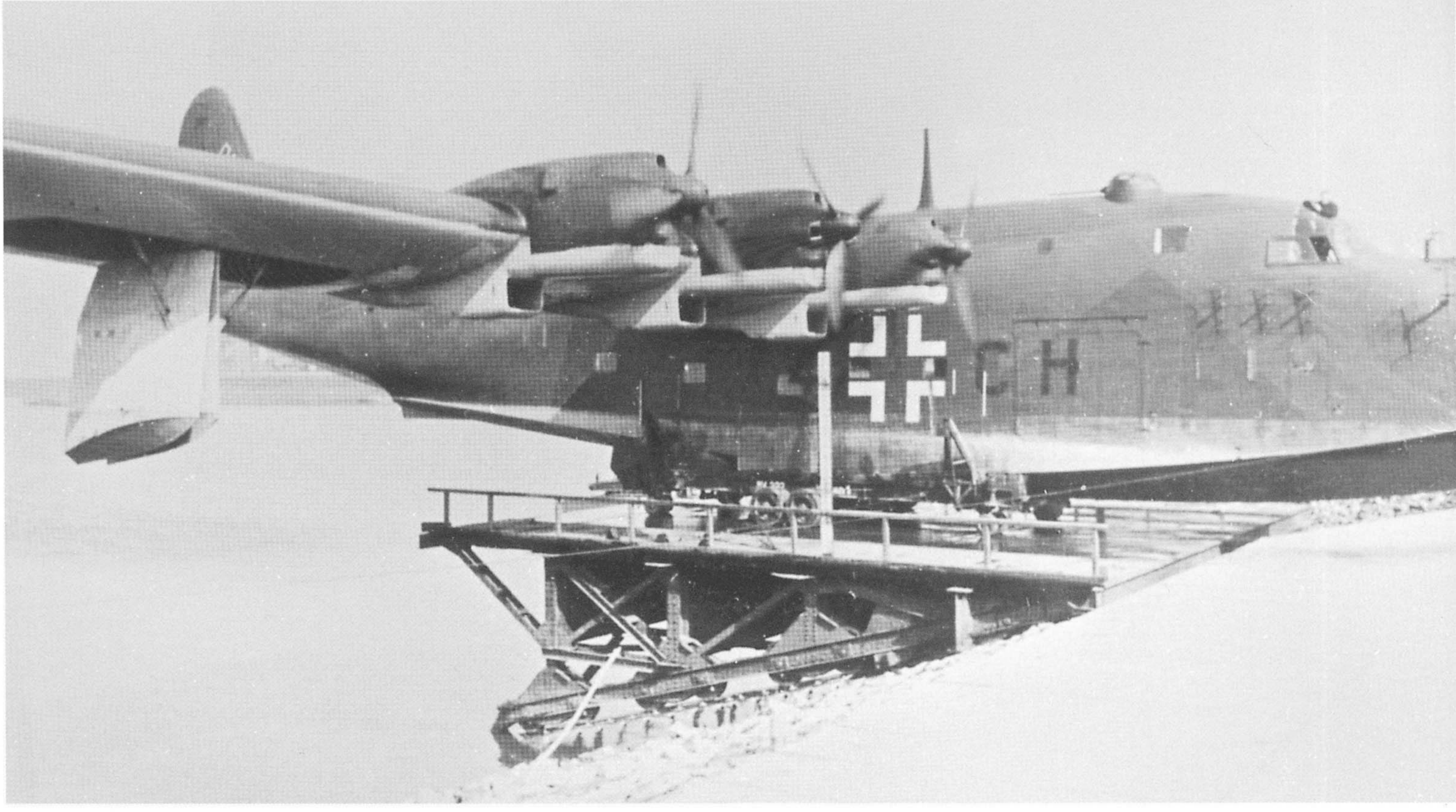
This page and opposite page bottom: Four views of the Blohm und Voss Bv 222 V4, X4+DH taken during 1942 while the aircraft was operating with LTS See 222 in the Mediterranean. Finished in the standard maritime camouflage of the greens 72 and 73 with blue 65 under surfaces, it carries a white fuselage theatre band around the rear fuselage and the unit Viking ship emblem is clearly visible on each side of the forward fuselage. In the aerial view, taken from either the V6 or V8, the white LTS (See) 222 tactical marking is clearly visible on the rudder. While en route to Tripoli on 10 December 1942, the V4 was badly damaged in an encounter with three patrolling RAF Beaufighters, during which the Bv 222 V8 was lost. Subsequently repaired, the V4 was transferred to the Aufklärungsstaffel See 222 at Biscarosse. It ended its days at Kiel-Holtenau where it was destroyed by German personnel in early 1945.

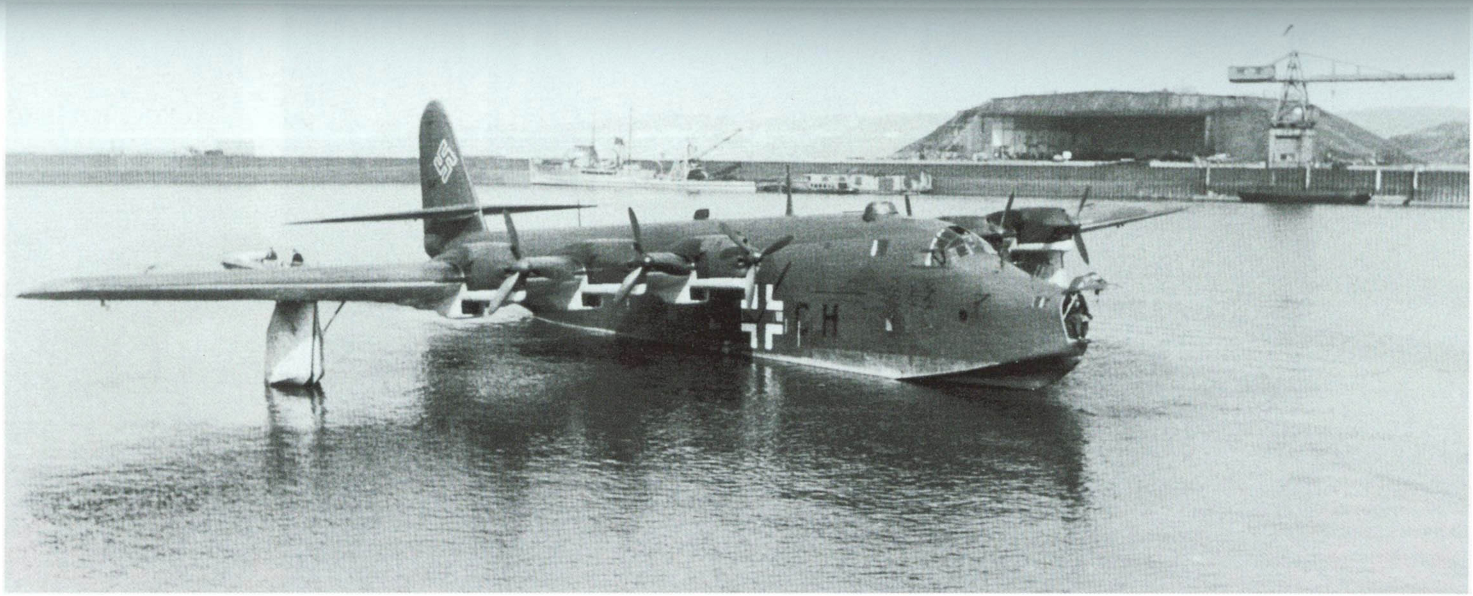


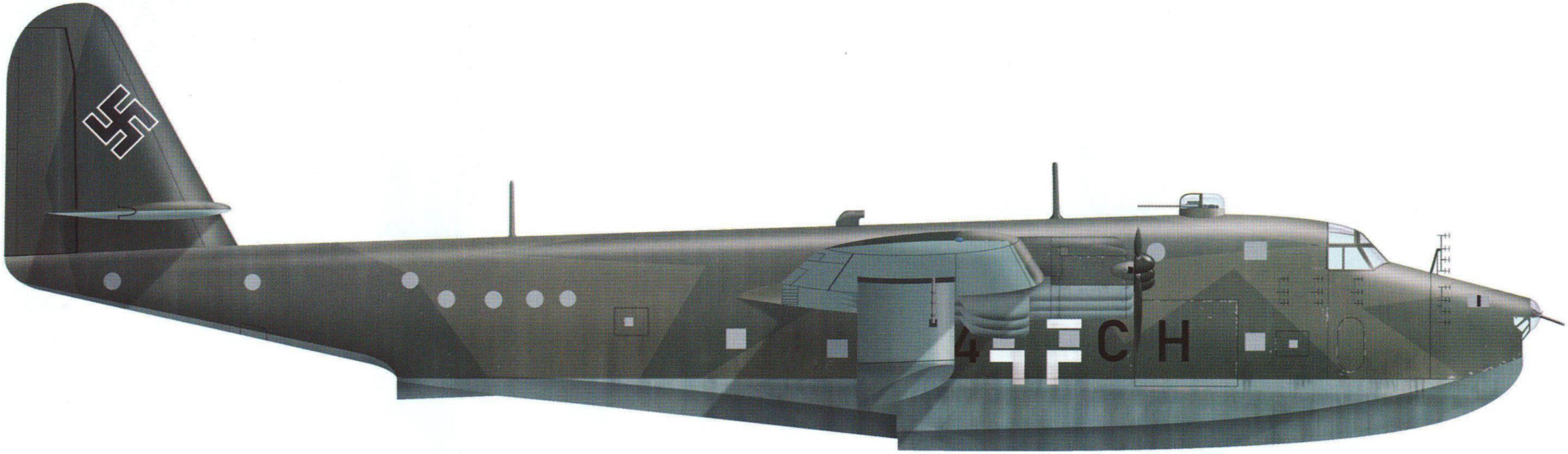




Two views of the second Bv 222 to wear the X4+CH codes after the loss of the V3 in June 1943. These views of the Bv 222 V12/C-012, W.Nr.310012 are listed as having been taken at Biscarosse on the French Biscay coast in mid-July 1943 at about the time of the formation of the 1./SAGr.129 from Aufklärungsstaffel See 222 and elements of the 3./KFlGr.406. Ending the war on the strength of SAGr.130 and captured intact by the British at Sörreisa, Norway, it was transferred to Calshot in the United Kingdom for a series of examinations and trials at the Marine Aircraft Experimental Establishment.



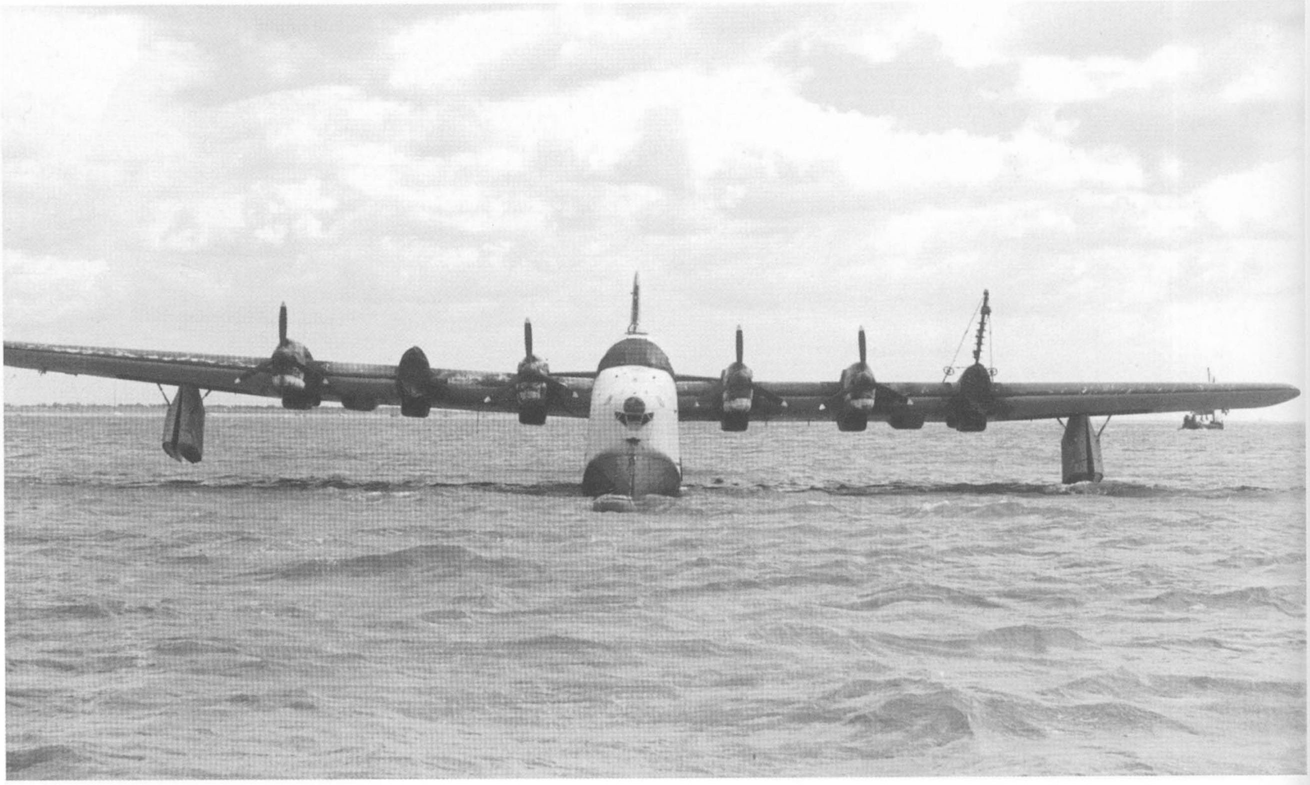


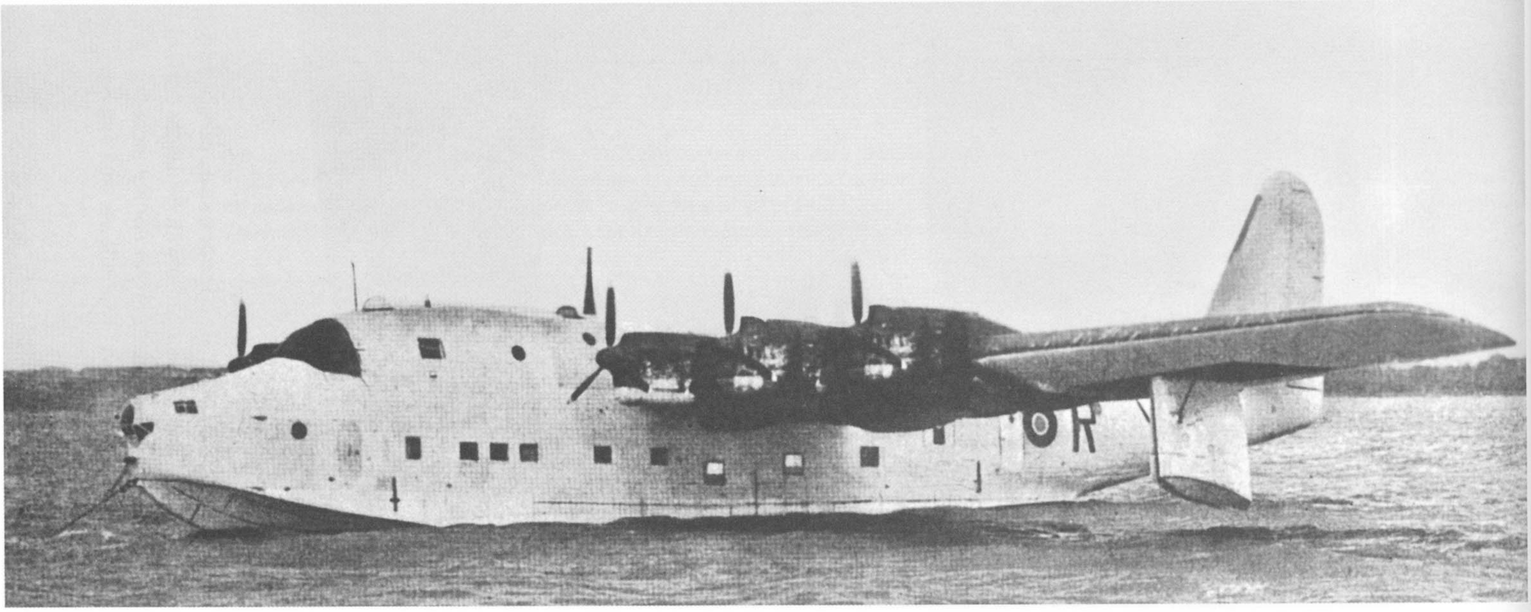


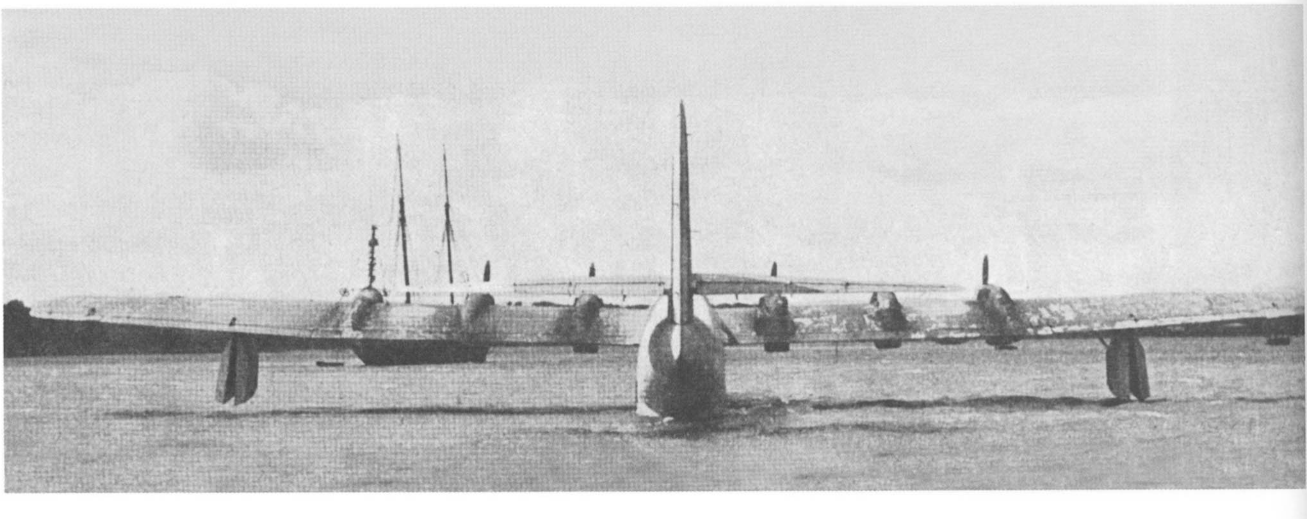
Blohm und Voss Bv 222 V3 X4+CH, Biscarosse, circa mid-1943

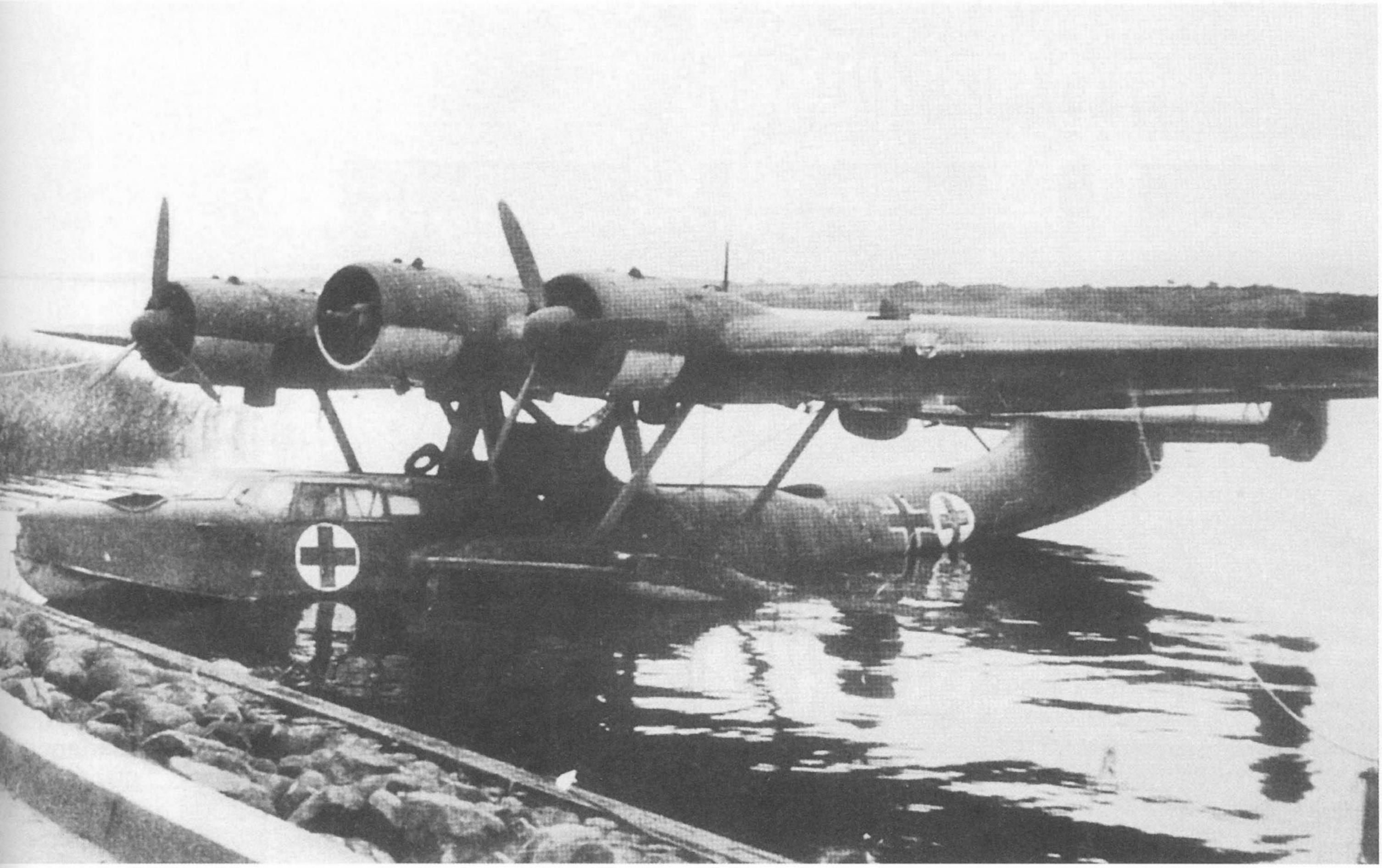
This aircraft bears the 72/73 maritime scheme with 65 under surfaces, in common with other Bv 222s. Although the wing and tail national markings are carried in the normal locations, flanked by the letters of its Verbandkennzeichen, X4+CH carries its fuselage Balkenkreuze on the lower hull sides beneath the wing.

Three views of the Bv 222 V12/C-012 taken following its transfer to Calshot during the summer of 1945 where it was partially repainted and given the British serial number of VP501 and identification letter 'R'. As was experienced by its former Luftwaffe owners, the British also found that its Jumo diesel engines were the source of much trouble (note that in the bows-on view, two of them appear to have been removed) and it is likely that the aircraft never flew again after 1945. It was scrapped in June 1947.









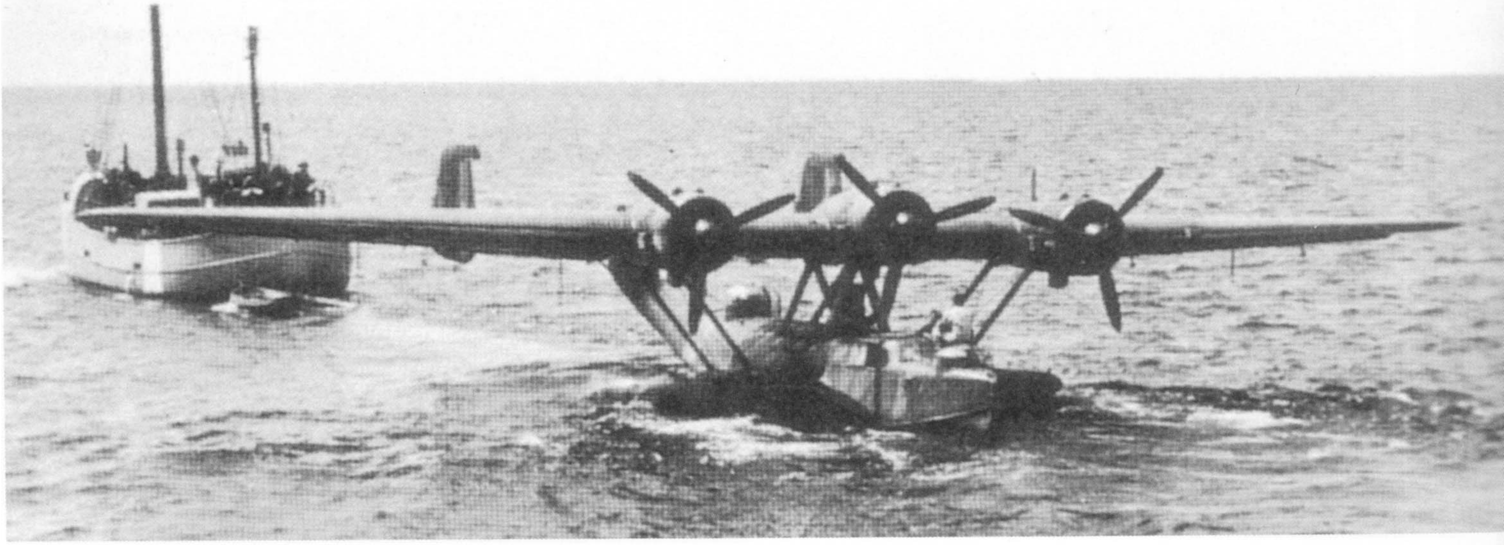
Minus the propeller for its centre BMW Bramo 323 R-2 Fafnir engine as well as its dorsal turret, this Dornier Do 24 T represents the state of many aircraft found in Germany following the end of the Second World War. Conspicuously marked with red crosses to indicate an ambulance or humanitarian role, this particular aircraft may have been one of the several of its type that took part in the Kurland evacuation.

Late War Seaplane Flights from Kurland

With the defeat of the German armies on the Eastern Front all but complete, and surrender only hours away, on 8 May 1945 attempts were made by various front and second line air units to evacuate as many soldiers and civilians from Kurland and East Prussia as possible. Included in this evacuation attempt were seaplanes and flying boats from both *SAGr.* 130 and *Seenotstaffel* 50. Although German units in western and north-west Europe had surrendered to Field Marshal Montgomery on 4 May, the terms of the surrender did not apply to German forces in Norway or the East. As a result, some 150 aircraft were assembled to provide an air bridge for the 200,000-odd soldiers trapped in the Kurland pocket and thereby evacuate them to Germany.

As the terms of the German ceasefire in the West specifically noted that all hostilities would cease at 0545 hrs on 8 May 1945, it was imperative for the German High Command that all aircraft involved in the evacuation operation were to be airborne before this time. In the event, and although the Western Allies protested, German ground personnel were able to claim that the aircraft were not responding to orders for their return to their bases and thus nothing could be done. Similar orders were issued stating that, despite shortening the flight time considerably, aircraft were forbidden to over-fly Sweden en route to Kurland. While some aircrew obeyed, many opted for a direct route. In flying from Stavanger direct to Cirava, crews were able to cut some 300 km (186 miles) from an otherwise 2,200 km (1,367 miles) journey around the southern tip of Sweden.

Thus, in the early morning hours of 8 May 1945, German aircraft began taking off from various locations in and along the Norwegian coast. Between 0150 and 0511 hrs, the western Allies monitored radio signals from two Bv 138s and two Do 24s. At least one of the Bv 138s was from the 1./*SAGr.* 130 and had taken off from Sola and flown to Windau where it landed at 0950 hrs. That afternoon the aircraft, loaded with soldiers, returned to Sola after an uneventful flight. Likewise, a Do 24, which had taken off from Kristiansand at 0300 hrs, also arrived at Windau before returning to the West that afternoon. In both cases, though, it is not known how many personnel the aircraft were able to evacuate.



Dornier Do 24 T, W.Nr.042 and coded 5W+BU of Seenotstaffel 50 is seen here shortly after surrendering to Swedish authorities at Trelleborg, Sweden on 9 May 1945.

On the afternoon of 8 May 1945, Do 24 T, W.Nr.42, '5W + BU', of *Seenotstaffel* 50, piloted by *Uffz.* Paul Blum, with *Ofw.* Heinz Frank, *Uffz.* Hans Joachim Linxweiler and *Ofw.* Günther Weiland as the crew, took off at 1630 hrs to fly to Windau from Gossen, Norway. Blum and his crew had been tasked with evacuating as many personnel from Kurland as possible, then flying to Germany where he was to surrender. In total, Blum and his crew were able to evacuate 37 people safely to Germany. Unfortunately, a Do 24 that took off for Kiel later that same evening became lost and seeing the lights of the city of Trelleborg in southern Sweden, landed near the city at 0500 hrs on 9 May. The aircraft was captured and towed to Trelleborg where it was taken to the F 2 Wing before later being handed over to the Soviets. The 37 men aboard were from the 2./*Flak.Abt.* 127, led by *Oblt.* Claus Winkler. Of those aboard, 26 were handed over to the Soviets, and only 14 are known to have returned to Germany.

Even after hostilities had ended, *Hptm.* Born's *Seenotgruppe* 81 flew several Do 24 flights to Kolberg. These flights were able to rescue some 116 wounded civilians and children. The last of these occurred on 16 June 1945, with the Do 24 carrying a red cross in a white circle on the nose, with a second one located on the fuselage next to the *Balkenkreuz.*

Unlike the *Kriegsmarine,* which saved some 26,000 soldiers and refugees, German maritime aircraft managed only to save a few hundred people from Soviet authorities. Despite this, their tenacity, camaraderie, bravery and devotion to duty could not be disputed. Throughout the war, Germany's maritime aviators had shown tremendous skill and courage in the face of technical inferiority and increasing enemy air superiority. Their actions and heroism, as typified by the late war flights in and out of Courland, were frequently repeated throughout the war.